

VARIOUS BUILDINGS TUNNEL LIGHTING, EXIT SIGNS, AND EMERGENCY GENERATORS DFCM PROJECT NO. 04190660

**Salt Lake
Community
College**

REDWOOD ROAD CAMPUS

4600 SOUTH REDWOOD ROAD
SALT LAKE CITY, UTAH

SOUTH CITY CAMPUS

1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH



State of Utah-Department of Administrative Services

**DIVISION OF FACILITIES CONSTRUCTION
AND MANAGEMENT**

4110 State Office Building / Salt Lake City, Utah 84114 / 538-3018

VICINITY PLAN
NOT TO SCALE



DFCM DESIGN AND CODE CRITERIA

(Fee A.E. Attach and fill in applicable data for each drawing submittal)

Applicable Codes:
International Building Code
Planning & Design Criteria to Prevent
Architectural Barriers for the Aged and
the Physically Handicapped.

Year
2003
International Mechanical Code
International Plumbing Code
International Energy Conservation Code
National Electrical Code
Year
2003
2003
2003
2002

A. Occupancy and Group : _____
Change in Use : Yes _____ No ☒ Mixed Occupancy : Yes ☒ No _____

B. Type of Construction (Circle) I F.R. II F.R. III 1 HR. B IV 1 HR. N V H.T. VI 1 HR. N VII 1 HR. N

C. Location on Property : F.R. Ext. Walls (Hrs.): Existing Ext. Wall Opening(s) Protection (Hrs.) Existing Each Occupancy

D. Occupancy separation required (Hrs.): Existing
Sprinklered: Indicate (Yes) or No
Stories : 1 or multiple

a. Actual Area² (ft²) Existing
b. Basic allowable area :
c. Allowable Area Increase due to side yards: N

d. Side yard area increase (ft²):
Accumulative sub-total (b+d):
Sprinkler: area increase (x3 single)
(x 2 multi)

e. Total Allowable Area for a single story:
x 2 for multi-story building:
f. Ratio = a/e
(Actual divided by allowable)

E. Fire-Resistive Requirements (Hrs.): (1 Hr., 2Hr., 3Hr., 4Hr., N.T.)

Exterior Bearing Walls: _____ Floors - Ceiling Floors
Interior Bearing Walls: _____ Roofs - Ceiling Roofs
Exterior Non-bearing Walls: _____ Exterior Doors and Windows
Structural Frame: _____ Shaft Enclosures
Partitions - Permanent: _____

RRC TUNNELS: GROUP 'U'
ADMINISTRATION BUILDING: MIXED GROUPS 'A-I' & 'B'
CHILD DEVELOPMENT LAB: GROUP 'E'
AUTOMOTIVE TRADES BLDG.: MIXED GROUPS 'B' & 'S-I'
SOUTH CITY CAMPUS MAIN BUILDING: MIXED GROUPS 'A-I' & 'B'
HEAT PLANT: GROUP 'B'

DRAWING INDEX

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| 3 | E-102 | RRC TUNNELS ELECTRICAL PLANS - SEGMENTS 1 & 2 |
| 4 | E-103 | RRC TUNNELS ELECTRICAL PLANS - SEGMENTS 3, & 4 |
| 5 | E-104 | RRC TUNNELS ELECTRICAL PLANS - SEGMENTS 5, 6 & 7 |
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**SLCC FACILITIES ELECTRIC SHOP
(PLACEMENT OF SALVAGED EQUIPMENT)**

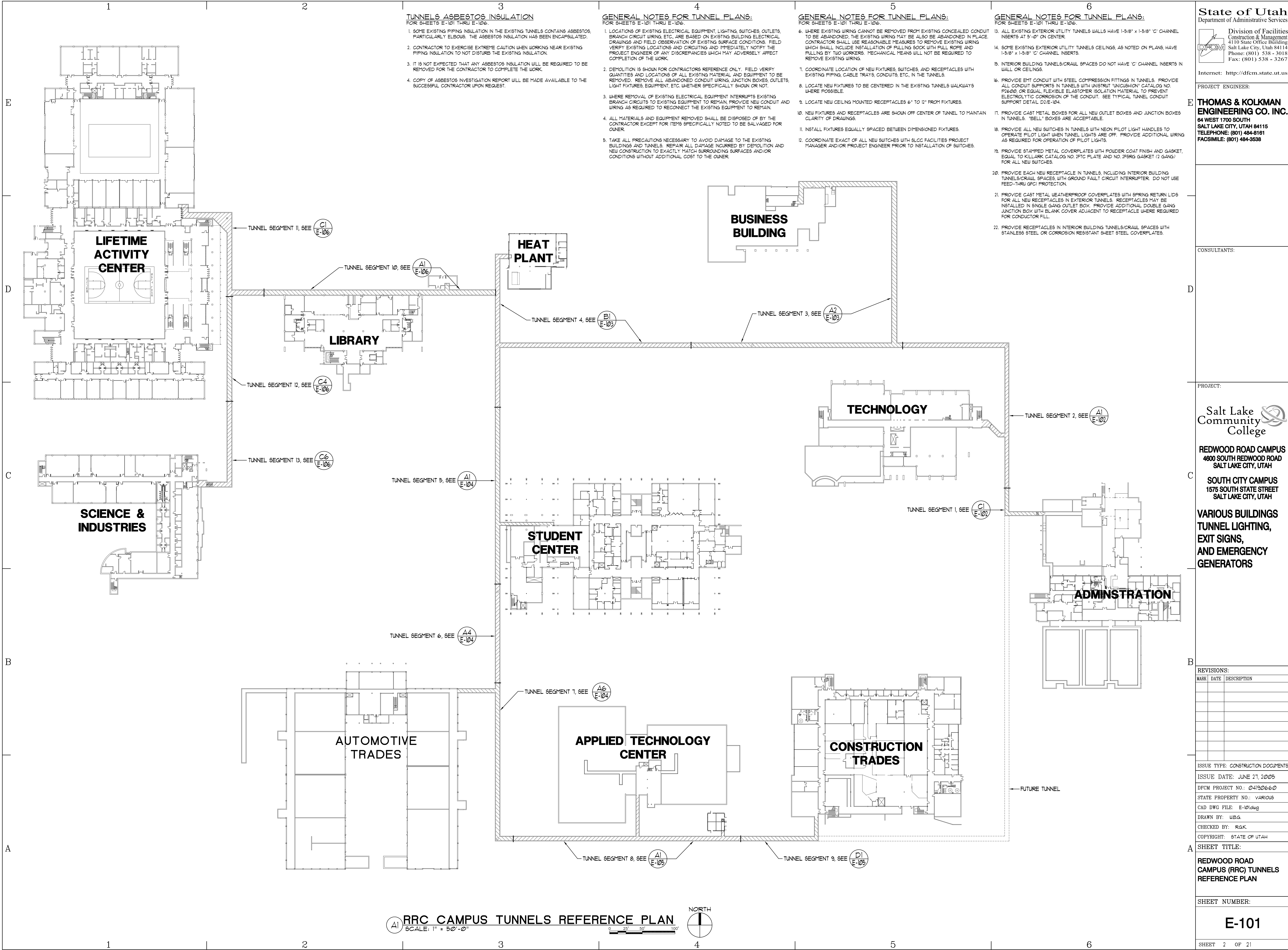


**AREA OF TUNNELS
SEE SHEET E-101**

**CHILD DEVELOPMENT LAB
SEE SHEET E-109**

SLCC REDWOOD ROAD CAMPUS PLAN
SCALE: 1" = 200'-0"





TUNNELS ASBESTOS INSULATION
FOR SHEETS E-101 THRU E-106.

1. SOME EXISTING PIPING INSULATION IN THE EXISTING TUNNELS CONTAINS ASBESTOS, PARTICULARLY ELBOWS. THE ASBESTOS INSULATION HAS BEEN ENCAPSULATED.
2. CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING PIPING INSULATION TO NOT DISTURB THE EXISTING INSULATION.
3. IT IS NOT EXPECTED THAT ANY ASBESTOS INSULATION WILL BE REQUIRED TO BE REMOVED FOR THE CONTRACTOR TO COMPLETE THE WORK.
4. COPY OF ASBESTOS INVESTIGATION REPORT WILL BE MADE AVAILABLE TO THE SUCCESSFUL CONTRACTOR UPON REQUEST.

GENERAL NOTES FOR TUNNEL PLANS:
FOR SHEETS E-101 THRU E-106.

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
3. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS TO EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
4. ALL MATERIALS AND EQUIPMENT REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR EXCEPT FOR ITEMS SPECIFICALLY NOTED TO BE SALVAGED FOR OWNER.
5. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND TUNNELS. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.

GENERAL NOTES FOR TUNNEL PLANS:
FOR SHEETS E-101 THRU E-106.

6. WHERE EXISTING WIRING CANNOT BE REMOVED FROM EXISTING CONCEALED CONDUIT TO BE ABANDONED, THE EXISTING WIRING MAY BE ALSO BE ABANDONED IN PLACE. CONTRACTOR SHALL USE REASONABLE MEASURES TO REMOVE EXISTING WIRING WHICH SHALL INCLUDE INSTALLATION OF PULLING SOCK WITH PULL ROPE AND PULLING BY TWO WORKERS. MECHANICAL MEANS WILL NOT BE REQUIRED TO REMOVE EXISTING WIRING.
7. COORDINATE LOCATION OF NEW FIXTURES, SWITCHES, AND RECEPTACLES WITH EXISTING PIPING, CABLE TRAYS, CONDUITS, ETC., IN THE TUNNELS.
8. LOCATE NEW FIXTURES TO BE CENTERED IN THE EXISTING TUNNELS WALKWAYS WHERE POSSIBLE.
9. LOCATE NEW CEILING MOUNTED RECEPTACLES 6" TO 12" FROM FIXTURES.
10. NEW FIXTURES AND RECEPTACLES ARE SHOWN OFF CENTER OF TUNNEL TO MAINTAIN CLARITY OF DRAWINGS.
11. INSTALL FIXTURES EQUALLY SPACED BETWEEN DIMENSIONED FIXTURES.
12. COORDINATE EXACT OF ALL NEW SWITCHES WITH SCCC FACILITIES PROJECT MANAGER AND/OR PROJECT ENGINEER PRIOR TO INSTALLATION OF SWITCHES.

GENERAL NOTES FOR TUNNEL PLANS:
FOR SHEETS E-101 THRU E-106.

13. ALL EXISTING EXTERIOR UTILITY TUNNELS WALLS HAVE 1-5/8" x 1-5/8" 'C' CHANNEL INSERTS AT 5'-0" ON CENTER.
14. SOME EXISTING EXTERIOR UTILITY TUNNELS CEILINGS, AS NOTED ON PLANS, HAVE 1-5/8" x 1-5/8" 'C' CHANNEL INSERTS.
15. INTERIOR BUILDING TUNNELS/CRAWL SPACES DO NOT HAVE 'C' CHANNEL INSERTS IN WALL OR CEILINGS.
16. PROVIDE EMT CONDUIT WITH STEEL COMPRESSION FITTINGS IN TUNNELS. PROVIDE ALL CONDUIT SUPPORTS IN TUNNELS WITH UNISTRUT 'UNICUSHION' CATALOG NO. F2600, OR EQUAL, FLEXIBLE ELASTOMER ISOLATION MATERIAL TO PREVENT ELECTROLYTIC CORROSION OF THE CONDUIT. SEE TYPICAL TUNNEL CONDUIT SUPPORT DETAIL D2/E-104.
17. PROVIDE CAST METAL BOXES FOR ALL NEW OUTLET BOXES AND JUNCTION BOXES IN TUNNELS. "BELL" BOXES ARE ACCEPTABLE.
18. PROVIDE ALL NEW SWITCHES IN TUNNELS WITH NEON PILOT LIGHT HANDLES TO OPERATE PILOT LIGHT WHEN TUNNEL LIGHTS ARE OFF. PROVIDE ADDITIONAL WIRING AS REQUIRED FOR OPERATION OF PILOT LIGHTS.
19. PROVIDE STAMPED METAL COVERPLATES WITH POWDER COAT FINISH AND GASKET, EQUAL TO KILLARK CATALOG NO. ZFC PLATE AND NO. ZFRSG GASKET (2 GANG) FOR ALL NEW SWITCHES.
20. PROVIDE EACH NEW RECEPTACLE IN TUNNELS, INCLUDING INTERIOR BUILDING TUNNELS/CRAWL SPACES, WITH GROUND FAULT CIRCUIT INTERRUPTER. DO NOT USE FEED-THRU GFCI PROTECTION.
21. PROVIDE CAST METAL WEATHERPROOF COVERPLATES WITH SPRING RETURN LIDS FOR ALL NEW RECEPTACLES IN EXTERIOR TUNNELS. RECEPTACLES MAY BE INSTALLED IN SINGLE GANG OUTLET BOX. PROVIDE ADDITIONAL DOUBLE GANG JUNCTION BOX WITH BLANK COVER ADJACENT TO RECEPTACLE WHERE REQUIRED FOR CONDUCTOR FILL.
22. PROVIDE RECEPTACLES IN INTERIOR BUILDING TUNNELS/CRAWL SPACES WITH STAINLESS STEEL OR CORROSION RESISTANT SHEET STEEL COVERPLATES.

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PROJECT ENGINEER:
**THOMAS & KOLKMAN
ENGINEERING CO. INC.**
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
FACSIMILE: (801) 484-3538

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SHEET TITLE:

REDWOOD ROAD
CAMPUS (RRC) TUNNELS
REFERENCE PLAN

SHEET NUMBER:

E-101

SHEET 2 OF 21

REFERENCE NOTES:

FOR SHEET E-104 ONLY

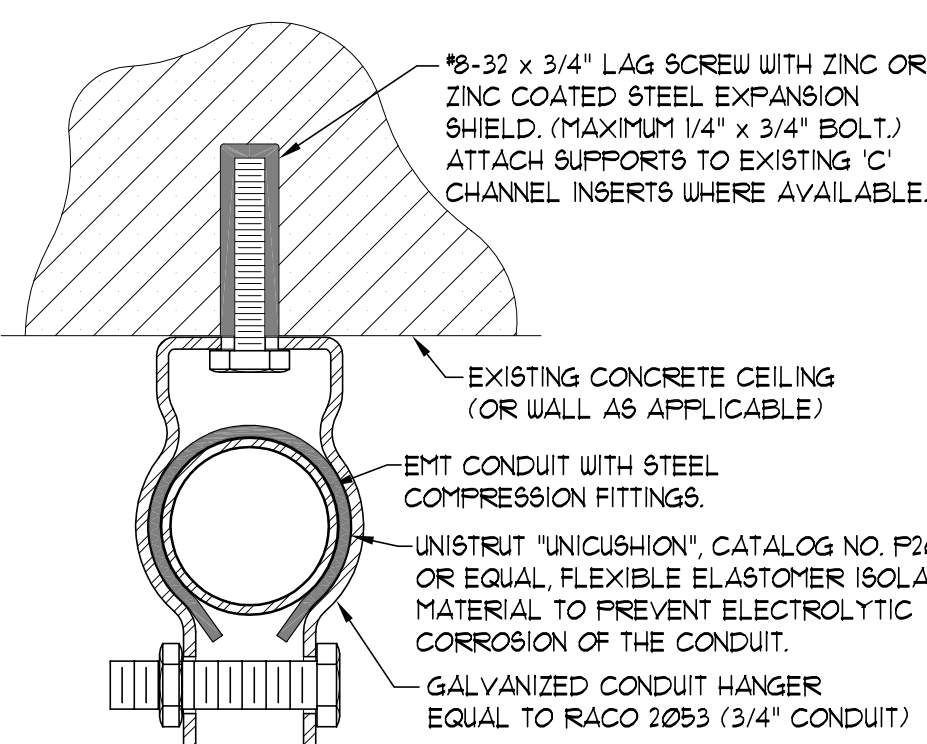
- 1) PROVIDE NEW CEILING MOUNTED FLUORESCENT FIXTURES AND CONTROLLING SWITCHES COMPLETE WITH NEW BRANCH CIRCUITS IN EXPOSED CONDUIT.
- 2) PROVIDE NEW DUPLEX RECEPTACLES SURFACE MOUNTED ON CEILING COMPLETE WITH NEW BRANCH CIRCUITS IN EXPOSED CONDUIT.
- 3) REMOVE EXISTING INCANDESCENT PORCELAIN SOCKET INCLUDING EXISTING BRANCH CIRCUIT WIRING. ABANDON EXISTING CONCEALED CONDUIT IN PLACE AND PROVIDE BLANK COVER PLATE ON EXISTING OUTLET BOX.
- 4) REMOVE EXISTING SWITCHES CONTROLLING EXISTING INCANDESCENT TUNNEL LIGHTING INCLUDING EXISTING BRANCH CIRCUIT WIRING AND EXPOSED CONDUIT. CAP EXISTING CONDUIT AT PENETRATION TO CEILING OR FLOOR AS REQUIRED.
- 5) PROVIDE NEW FLUORESCENT FIXTURES, WALL MOUNTED AS CLOSE TO TUNNEL CEILING AS POSSIBLE, 1'-0" ABOVE FINISHED FLOOR, AND CONTROLLING SWITCHES COMPLETE WITH NEW BRANCH CIRCUITS IN EXPOSED CONDUIT.
- 6) REMOVE WIRING FOR EXISTING CIRCUITS (STC) P-8 SERVING STC UTILITY TUNNEL LIGHTING. PROVIDE NEW WIRING FOR CIRCUITS (STC) P-8/228 FOR NEW RECEPTACLES AS SHOWN.
- 7) REMOVE EXISTING INCANDESCENT PORCELAIN SOCKET FIXTURE AND INSTALL SURFACE OUTLET BOX EXTENSION WITH RECEPTACLE ON EXISTING FLUSH OUTLET BOX. REPLACE EXISTING BRANCH CIRCUIT WIRING WHERE REQUIRED TO PROVIDE NEW CIRCUITING ARRANGEMENT SHOWN.
- 8) REMOVE EXISTING INCANDESCENT PORCELAIN SOCKET FIXTURE AND INSTALL SURFACE OUTLET BOX EXTENSION WITH RECEPTACLE ON EXISTING FLUSH OUTLET BOX. CONNECT TO EXISTING BRANCH CIRCUIT.
- 9) REMOVE EXISTING INCANDESCENT PORCELAIN SOCKET FIXTURE AND INSTALL BLANK COVERPLATE ON EXISTING FLUSH OUTLET BOX.
- 10) PROVIDE NEW TYPEWRITTEN CIRCUIT INDEX FOR EXISTING PANELBOARD TO REFLECT ALL CHANGES IN CIRCUITING.
- 11) PROVIDE NEW INTERCOM STATION, SEE INTERCOM RISER DIAGRAM, SHEET E-601.
- 12) PROVIDE NEW IP-20A BRANCH CIRCUIT BREAKER IN EXISTING STC PANEL "P" TO SERVE NEW RECEPTACLE CIRCUIT (STC) P-28.

TUNNEL SUPPORT NOTES:

1. DO NOT USE SHOT ANCHORS OF ANY KIND IN EXISTING TUNNELS CEILINGS OR WALLS.
2. EPOXY ANCHORS ARE ACCEPTABLE FOR SUBSTITUTE OF EXPANSION ANCHORS.
3. DRILL-IN MASONRY ANCHORS ARE SUBJECT TO APPROVAL OF THE PROJECT ENGINEER.
4. CONDUIT MAY BE SUPPORTED FROM EXISTING 'C' CHANNEL INSERTS WHERE AVAILABLE.
5. PROVIDE SIMILAR SUPPORT METHODS FOR NEW FIXTURES, OUTLET BOXES, ETC.
6. DETAIL IS APPLICABLE TO EXTERIOR UTILITY TUNNELS ONLY. INTERIOR BUILDING TUNNELS/CRAWL SPACE MAY USE STANDARD SUPPORT METHODS IN ACCORDANCE WITH DIVISION 16 SPECIFICATIONS.

E2 TYPICAL TUNNEL FIXTURE SUPPORT DETAIL

SCALE: 3" = 1'-0"



D2 TYPICAL TUNNEL CONDUIT SUPPORT DETAIL

SCALE: 1" = 1'-0"

MATCH LINE, CONTINUED
IN SEGMENT 5, SEE (A1) E-104

ABANDONED
TUNNEL ACCESS
MANHOLE

STUDENT CENTER (STC)

MATCH LINE, CONTINUED
IN SEGMENT 1, SEE (A6) E-104

STUDENT CENTER (STC)

NOTE:
SEE SHEET E-101 FOR REPLACEMENT OF EXISTING
LIGHTING IN STUDENT CENTER BUILDING TUNNELS.

MECHANICAL ROOM

XFMR
VAULT #2

ELECT.
ROOM #2

XFMR
VAULT #1

ELECT.
ROOM #1

A1 TUNNEL ELECTRICAL PLAN - SEGMENT 5

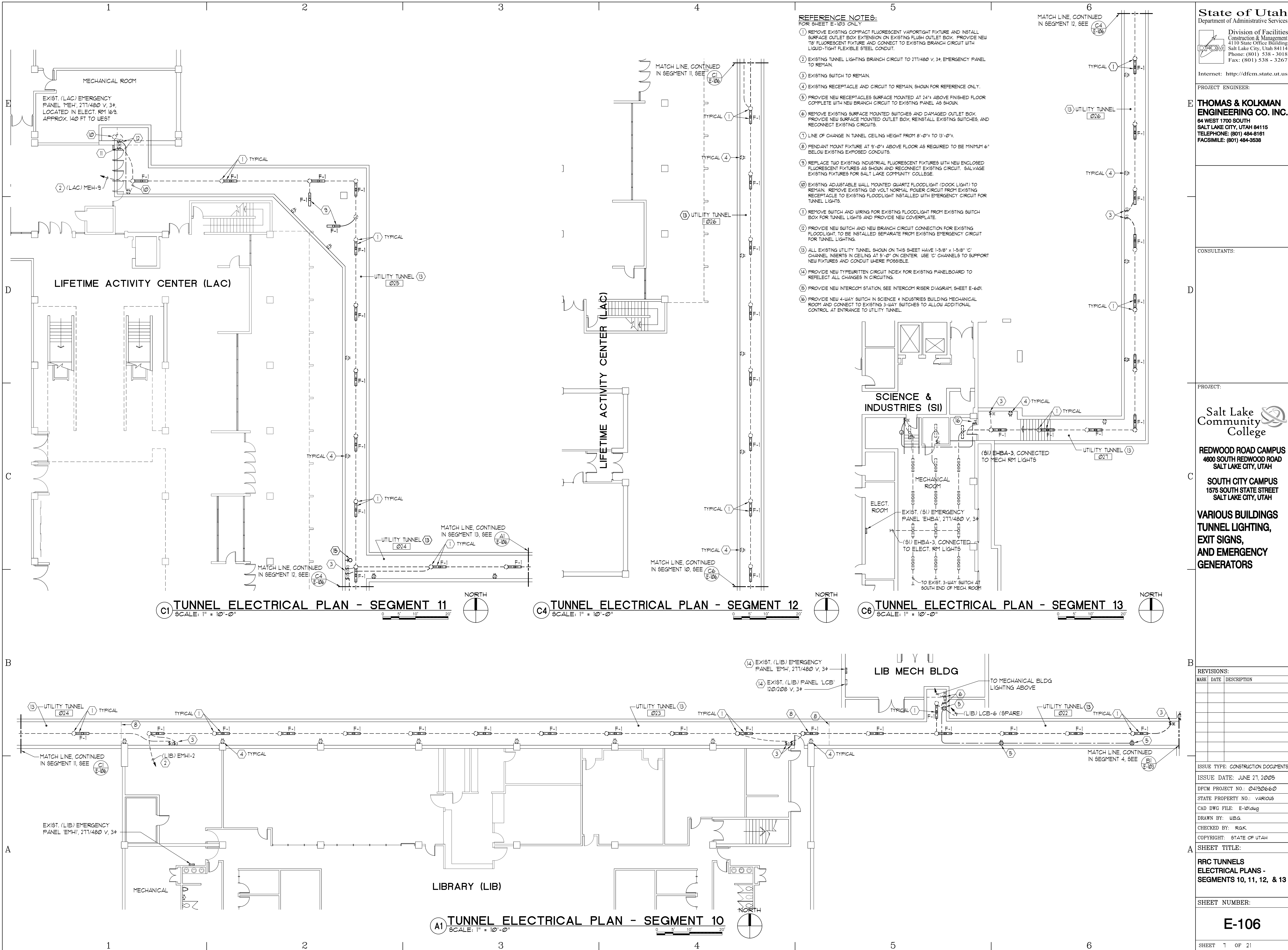
SCALE: 1" = 10'-0"

A4 TUNNEL ELECTRICAL PLAN - SEGMENT 6

SCALE: 1" = 10'-0"

A6 TUNNEL ELECTRICAL PLAN - SEGMENT 7

SCALE: 1" = 10'-0"



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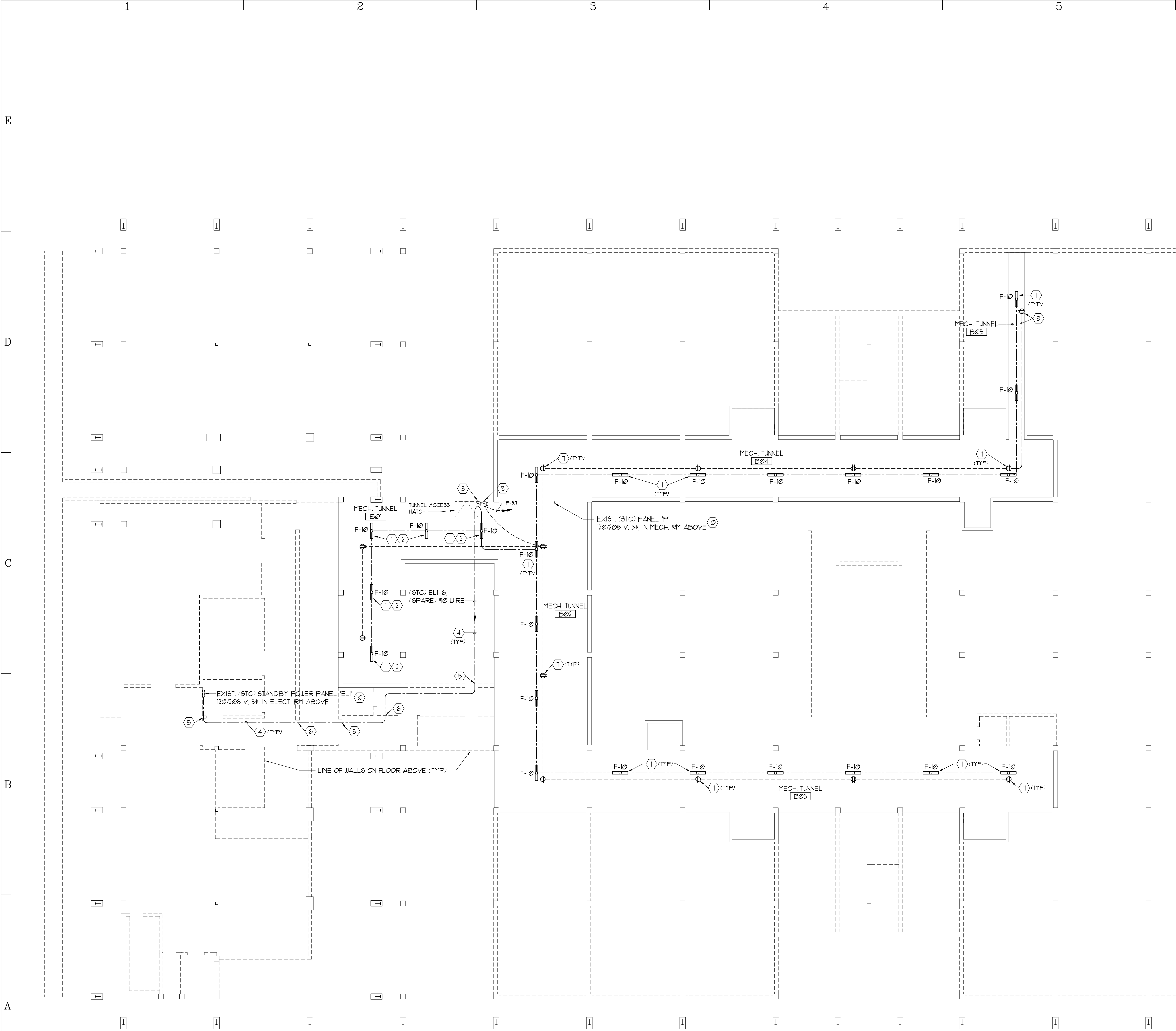
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A SHEET TITLE:
RRC TUNNELS
ELECTRICAL PLANS -
SEGMENTS 10, 11, 12, & 13

SHEET NUMBER:
E-106

SHEET 7 OF 21



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SHEET TITLE:

STUDENT CENTER
TUNNELS
ELECTRICAL PLAN

SHEET NUMBER:

E-107

SHEET 8 OF 21

STUDENT CENTER TUNNELS ELECTRICAL PLAN
SCALE: 1" = 10'-0"

ADMINISTRATION BLDG ASBESTOS CEILINGS

1. ORIGINAL ACOUSTIC CEILING TILES ON GYPSUM BOARD CEILINGS CONTAIN ASBESTOS THROUGHOUT THE ADMINISTRATION BUILDING.
2. CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING ASBESTOS CEILING TILES TO NOT DISTURB THE EXISTING TILES.
3. THE OWNER WILL REMOVE AND REPLACE EXISTING CEILING TILES WHERE THE WORK REQUIRES CUTTING OR OTHER SIGNIFICANT DISTURBANCE OF THE EXISTING CEILING TILES. ALLOW A MINIMUM OF 2 WEEKS FOR THE OWNER TO ARRANGE FOR REMOVAL OF EXISTING CEILING TILES.
4. COPY OF ASBESTOS INVESTIGATION REPORT WILL BE MADE AVAILABLE TO THE SUCCESSFUL CONTRACTOR UPON REQUEST.

REFERENCE NOTES:

- FOR SHEET E-101 ONLY
- (1) EXISTING LED EXIT LIGHT CONNECTED TO EMERGENCY BRANCH CIRCUIT TO REMAIN. SHOWN FOR REFERENCE ONLY.
 - (2) REPLACE EXISTING EXIT LIGHT WITH NEW LED EXIT LIGHT AND CONNECT TO EXISTING EMERGENCY BRANCH CIRCUIT.
 - (3) PROVIDE NEW EXIT LIGHT IN EXISTING GYPSUM BOARD CEILING WITH ACOUSTICAL TILE. CONNECT TO EXISTING EMERGENCY LIGHT CIRCUIT USING TYPE MC METAL CLAD CABLE FISHED THROUGH CEILING SPACE.
 - (4) PROVIDE NEW EXIT LIGHT IN EXISTING ACOUSTICAL GRID CEILING SYSTEM. CONNECT TO EXISTING EMERGENCY LIGHT CIRCUIT USING EMT CONDUIT IN ACCESSIBLE CEILING SPACE.
 - (5) REMOVE EXISTING WALL MOUNTED SELF-LUMINOUS EXIT SIGN AT LOCATION OF NEW CEILING MOUNTED EXIT LIGHT. REPAIR EXISTING WALL AS REQUIRED TO MATCH SURROUNDING SURFACES.
 - (6) PROVIDE WHITE PAINTED SHEET METAL CLOSURE PLATE TO CLOSE RECESSED HOUSING OF EXISTING EDGE-LIT EXIT SIGN.
 - (7) REMOVE ABANDONED EMERGENCY LIGHTING BATTERY UNIT INCLUDING ALL ASSOCIATED CONDUIT, WIRING, BOXES, ETC.
 - (8) DRILL AND FIRE SEAL EXISTING MASONRY WALL FOR NEW CABLE OR CONDUIT PENETRATION.

GENERAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
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3. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS TO EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
4. ALL MATERIALS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER FOR STORAGE OR BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
5. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND TUNNELS. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
6. ALL EXISTING EXIT LIGHTS IN ADMINISTRATION BUILDING ARE BELIEVED TO BE CIRCUITED TO EXISTING EMERGENCY PANEL 'EP', CIRCUIT 'M', UNLESS INDICATED OTHERWISE. CONTRACTOR TO FIELD VERIFY EXISTING CIRCUITING.

Internet: <http://dfcm.state.ut.us>

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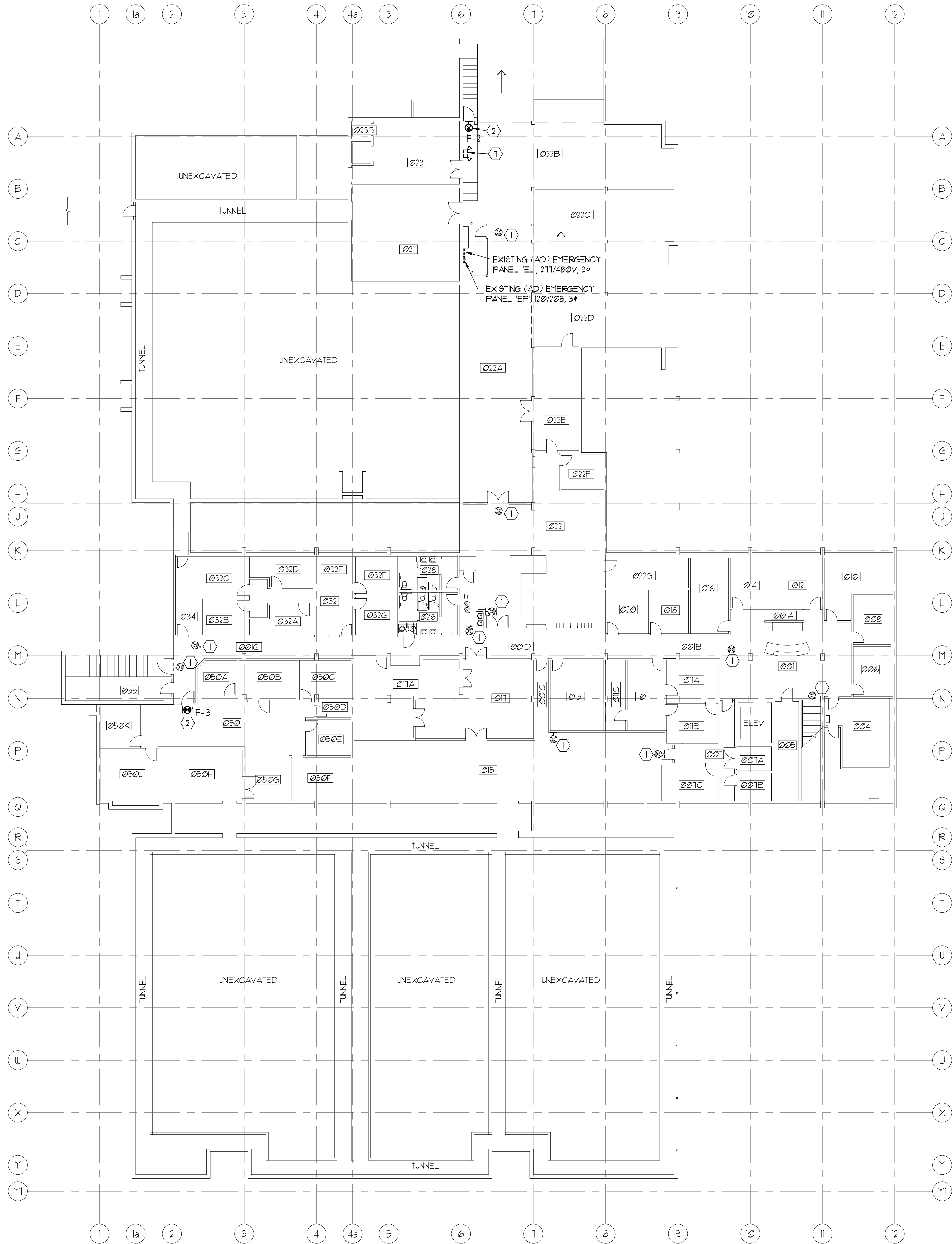
SHEET TITLE:

**ADMINISTRATION BUILDING
LOWER & MAIN LEVELS
ELECTRICAL PLANS**

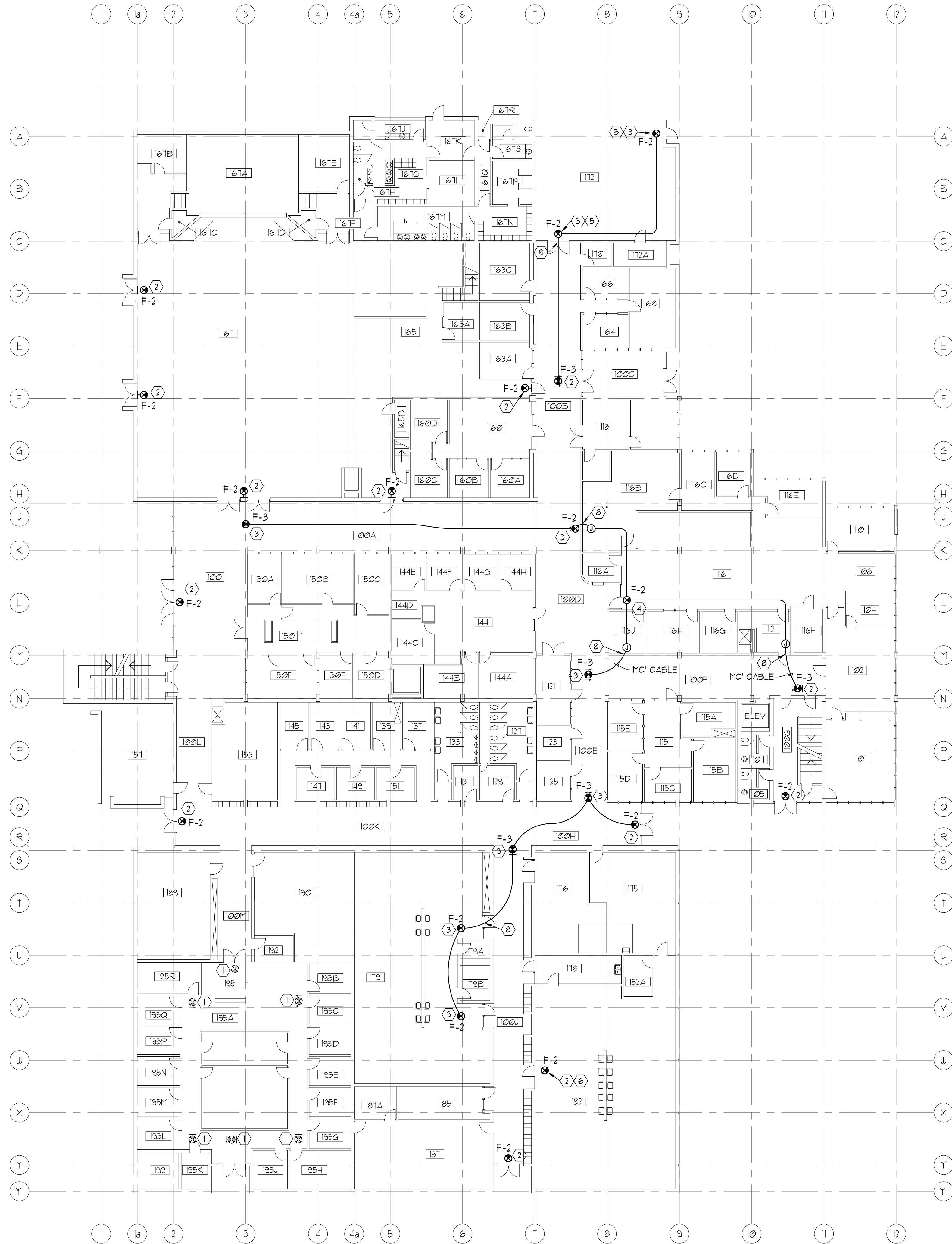
SHEET NUMBER:

E-108

SHEET 9 OF 21



ADMINISTRATION BUILDING LOWER LEVEL ELECTRICAL PLAN
SCALE: 1/16" = 1'-0"



ADMINISTRATION BUILDING MAIN LEVEL ELECTRICAL PLAN
SCALE: 1/16" = 1'-0"



ADMINISTRATION BLDG ASBESTOS CEILINGS

1. ORIGINAL ACOUSTIC CEILING TILES ON GYPSUM BOARD CEILINGS CONTAIN ASBESTOS THROUGHOUT THE ADMINISTRATION BUILDING.
2. CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING ASBESTOS CEILING TILES TO NOT DISTURB THE EXISTING TILES.
3. THE OWNER WILL REMOVE AND REPLACE EXISTING CEILING TILES WHERE THE WORK REQUIRES CUTTING OR OTHER SIGNIFICANT DISTURBANCE OF THE EXISTING CEILING TILES. ALLOW A MINIMUM OF 2 WEEKS FOR THE OWNER TO ARRANGE FOR REMOVAL OF EXISTING CEILING TILES.
4. COPY OF ASBESTOS INVESTIGATION REPORT WILL BE MADE AVAILABLE TO THE SUCCESSFUL CONTRACTOR UPON REQUEST.

REFERENCE NOTES:

- FOR SHEET E-108 ONLY
1. REPLACE EXISTING EXIT LIGHT WITH NEW LED EXIT LIGHT AND CONNECT TO EXISTING EMERGENCY BRANCH CIRCUIT.
 2. REPLACE EXISTING BATTERY BACKUP EXIT LIGHT WITH NEW LED BATTERY BACKUP EXIT LIGHT AND CONNECT TO EXISTING CIRCUIT.
 3. REPLACE EXISTING BATTERY BACKUP EMERGENCY LIGHTING UNIT WITH NEW BATTERY BACKUP EMERGENCY LIGHTING UNIT AND CONNECT TO EXISTING CIRCUIT. WASH EXISTING WALL USING MILD DETERGENT AS REQUIRED TO REMOVE ACCUMULATED DIRT. EXISTING EMERGENCY LIGHTING UNITS ARE CONNECTED TO THE SAME BRANCH CIRCUIT AS GENERAL ROOM LIGHTING AHEAD OF LOCAL SWITCHES.
 4. PROVIDE NEW EXIT LIGHT IN EXISTING GYPSUM BOARD CEILING WITH ACOUSTICAL TILE. CONNECT TO THE SAME BRANCH CIRCUIT AS GENERAL ROOM LIGHTING AHEAD OF LOCAL SWITCHES USING EMT CONDUIT INSTALLED IN EXISTING ATTIC SPACE. REMOVE EXISTING PAPER OR PLASTIC EXIT SIGN FROM WALL AT EXTERIOR DOORS AND WASH WALL TO REMOVE ACCUMULATED DIRT AT SIGNS.

GENERAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
3. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS TO EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
4. ALL MATERIALS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER FOR STORAGE OR BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
5. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND TUNNELS. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
6. ALL EXISTING EXIT LIGHTS IN ADMINISTRATION BUILDING ARE BELIEVED TO BE CIRCUITED TO EXISTING EMERGENCY PANEL 'EP', CIRCUIT 'M', UNLESS INDICATED OTHERWISE. CONTRACTOR TO FIELD VERIFY EXISTING CIRCUITING.

State of Utah
Department of Administrative Services

Division of Facilities
Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267

Internet: <http://dfcm.state.ut.us>

PROJECT ENGINEER:
**THOMAS & KOLKMAN
ENGINEERING CO. INC.**
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
FACSIMILE: (801) 484-3538

CONSULTANTS:

PROJECT:

Salt Lake
Community
College

REDWOOD ROAD CAMPUS
4800 SOUTH REDWOOD ROAD
SALT LAKE CITY, UTAH

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

VARIOUS BUILDINGS
TUNNEL LIGHTING,
EXIT SIGNS,
AND EMERGENCY
GENERATORS

REVISIONS:

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SHEET TITLE:

ADMIN BLDG SECOND &
THIRD LEVELS AND
CHILD DEVELOPMENT LAB
ELECTRICAL PLANS

SHEET NUMBER:

E-109

SHEET 10 OF 21

1

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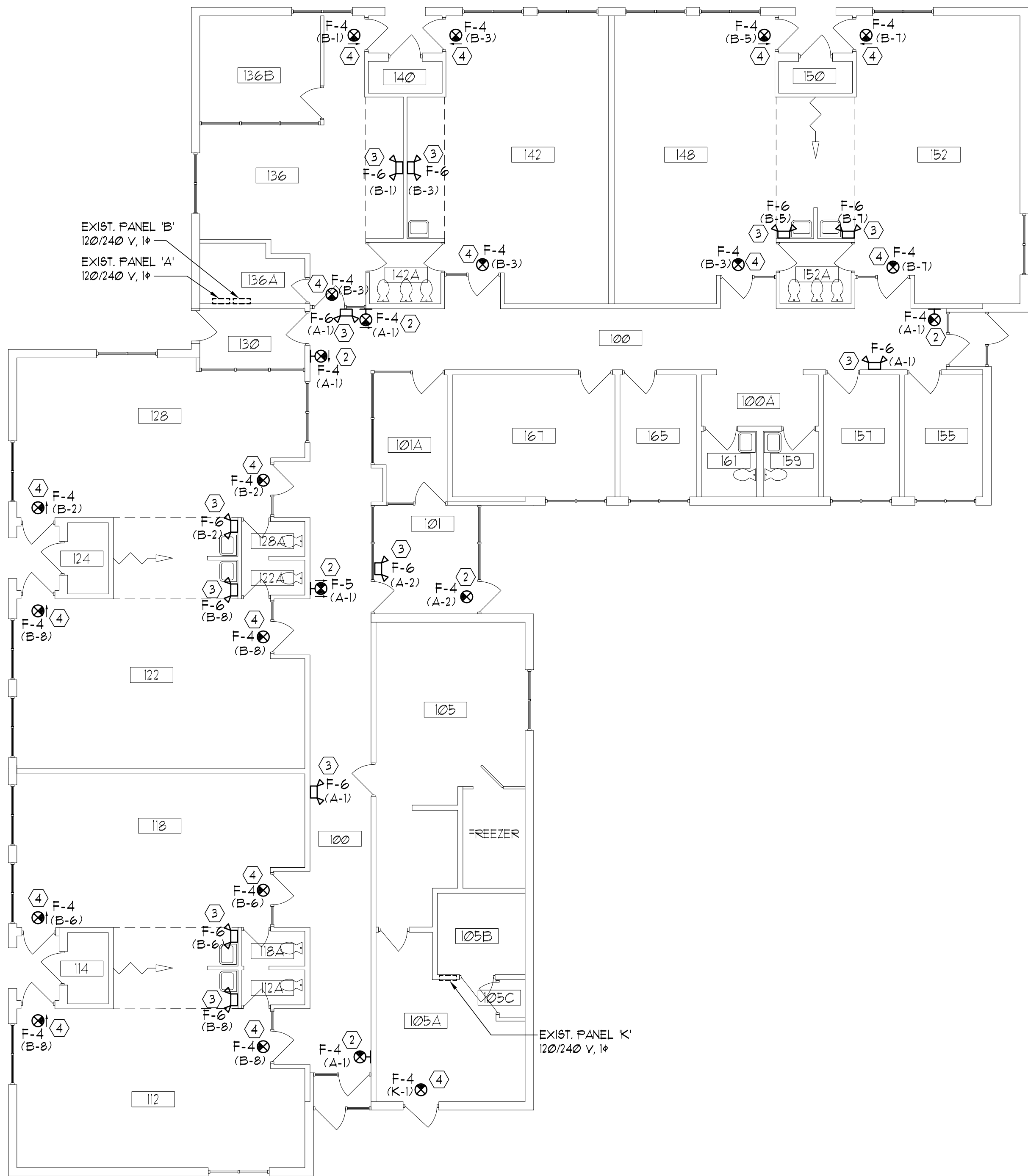
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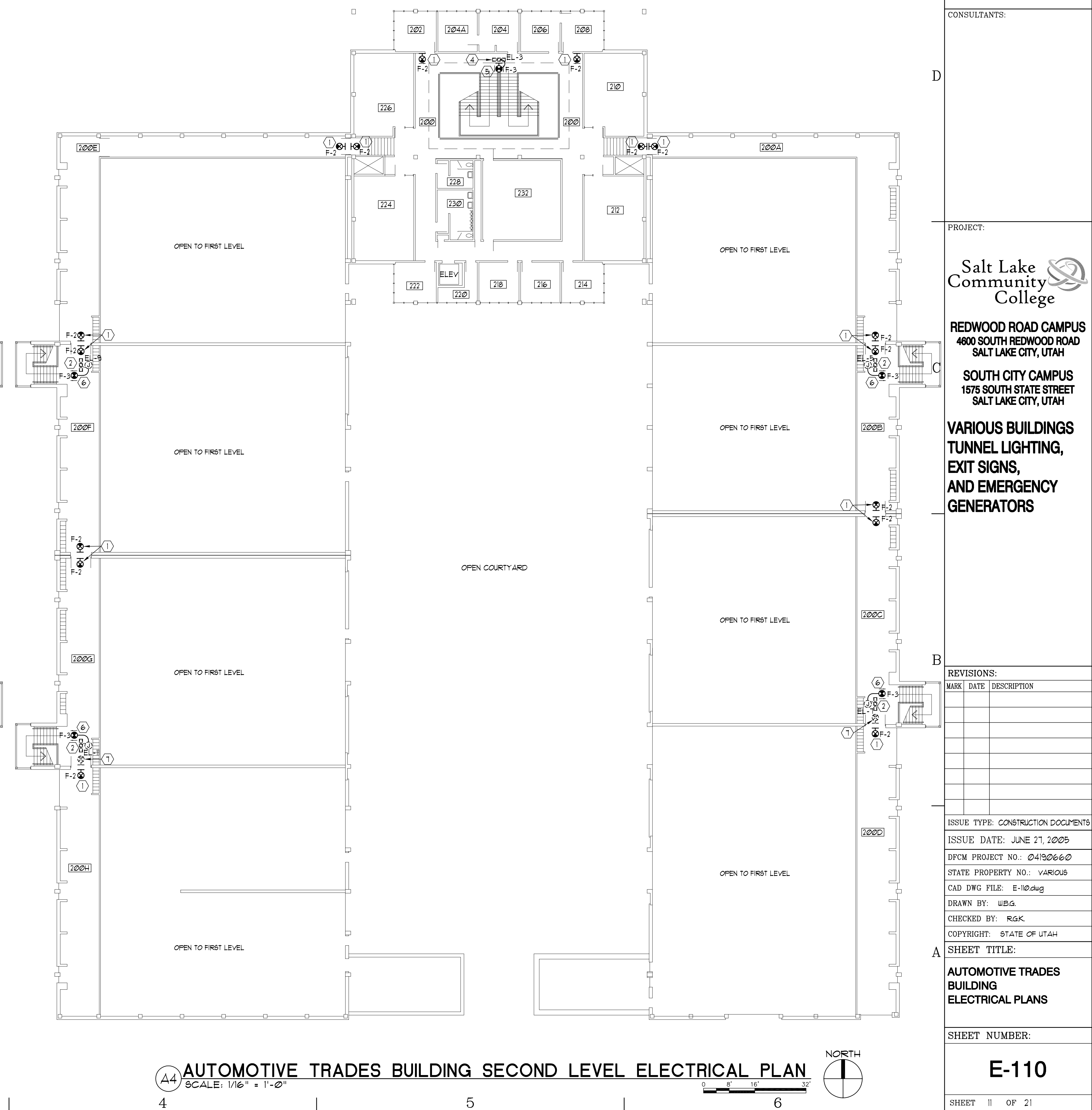
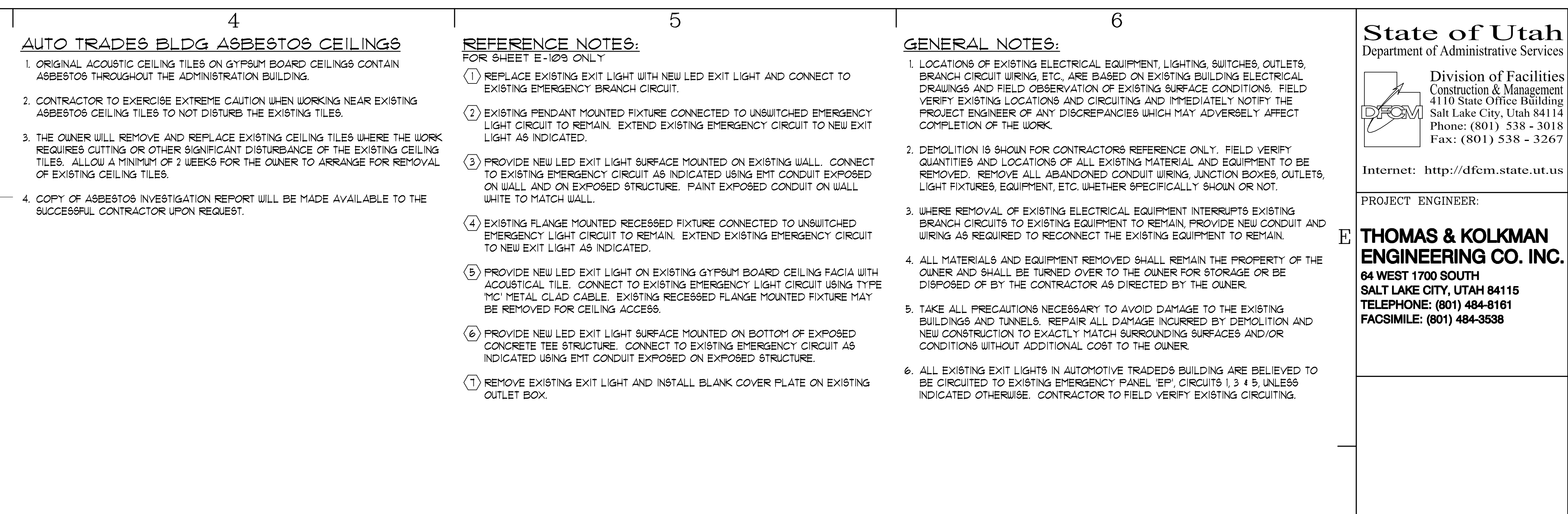
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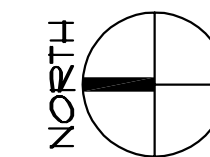
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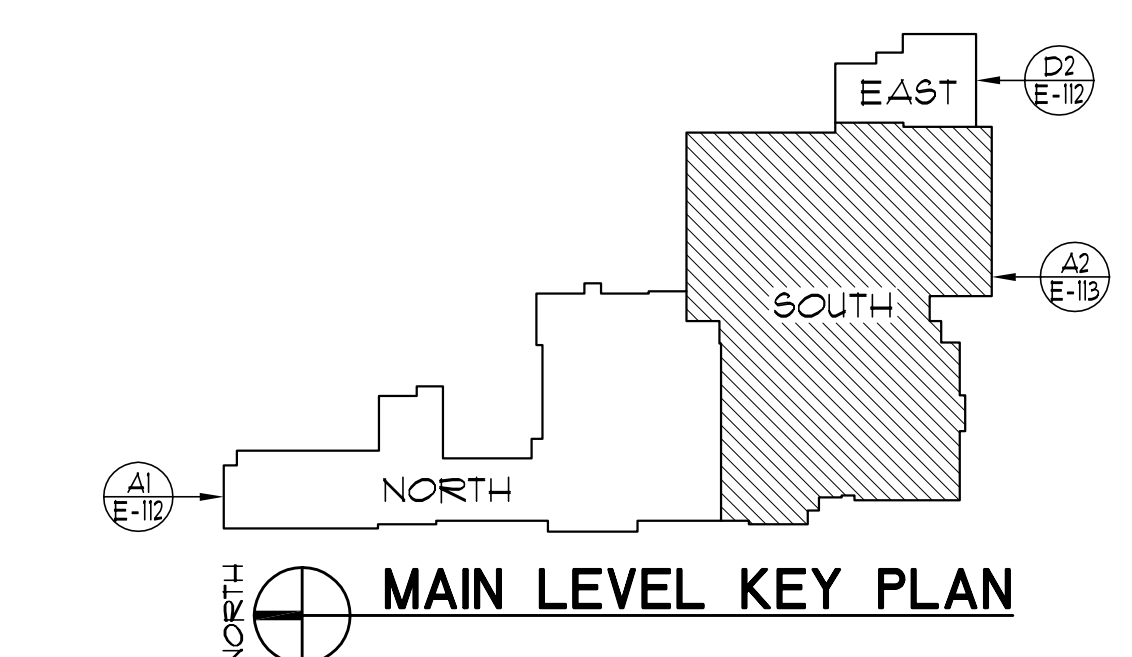




- CABLE ABOVE EXISTING PLASTER CEILINGS AND CONNECT TO EXISTING EMERGENCY LIGHTING CIRCUIT AS SHOWN.
- (6) PROVIDE NEW EXIT LIGHT IN EXISTING ACCESSIONAL GRID CEILING SYSTEM, CONNECT TO EXISTING EMERGENCY LIGHT CIRCUIT AS SHOWN USING EMT CONDUIT IN ACCESSIBLE CEILING SPACE.
- (7) SURFACE MOUNT NEW EXIT LIGHT. PROVIDE EXTENSION BRACKET AS REQUIRED TO CLEAR EXISTING COLD WATER PIPE ABOVE DOOR. PROVIDE NEW EMT CONDUIT EXPOSED IN MECHANICAL ROOM TO CONNECT TO EXISTING EMERGENCY LIGHTING CIRCUIT AS SHOWN.
- (8) SURFACE MOUNT NEW EXIT LIGHT WITH BOTTOM 6" ABOVE EXISTING DOOR. PROVIDE NEW EMT CONDUIT EXPOSED IN MECHANICAL ROOM TO CONNECT TO EXISTING EMERGENCY LIGHTING CIRCUIT AS SHOWN.
- (9) DRILL AND FIRE SEAL EXISTING MASONRY WALL FOR NEW CABLE OR CONDUIT PENETRATION.

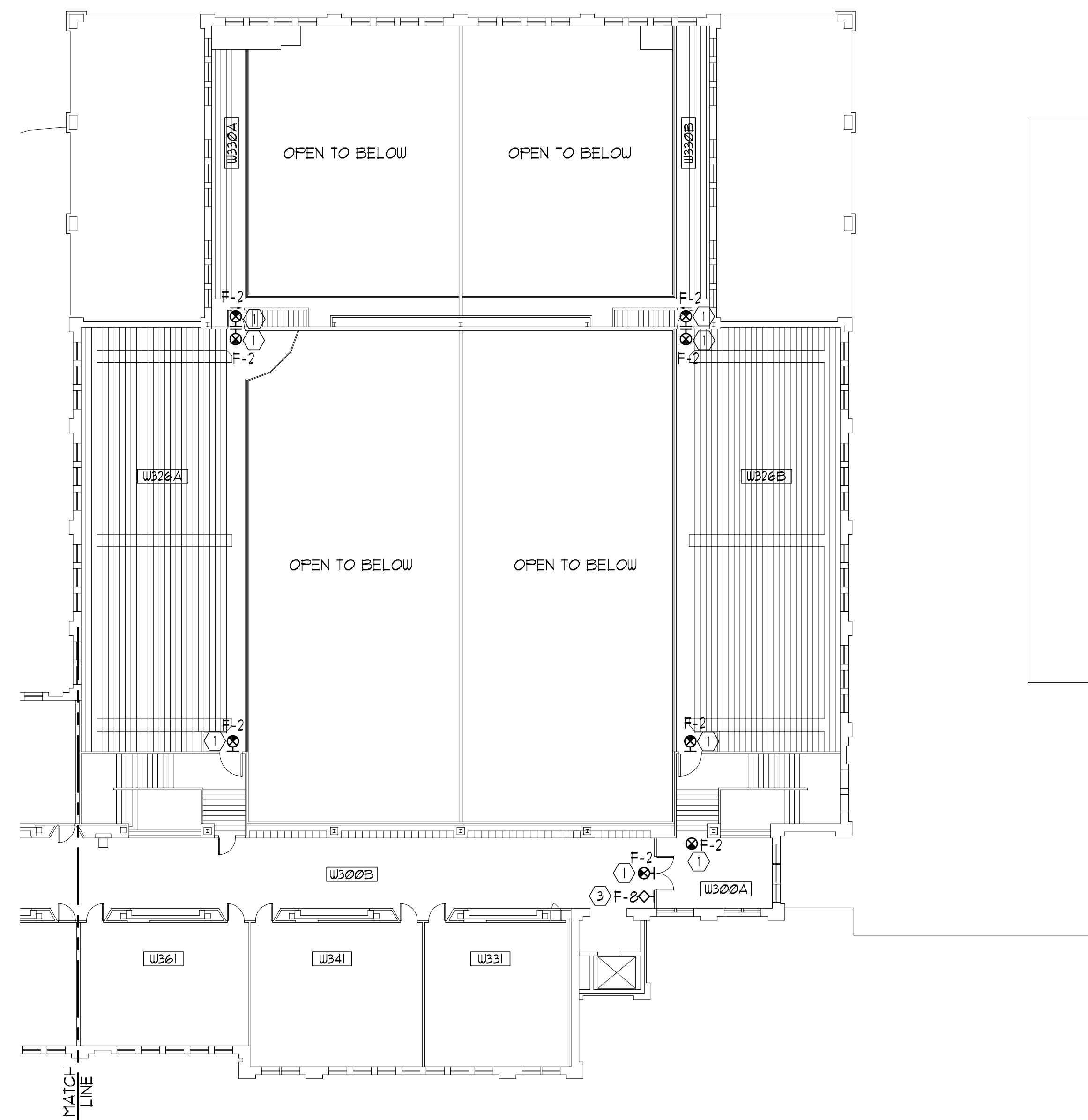
MAIN LEVEL KEY PLAN



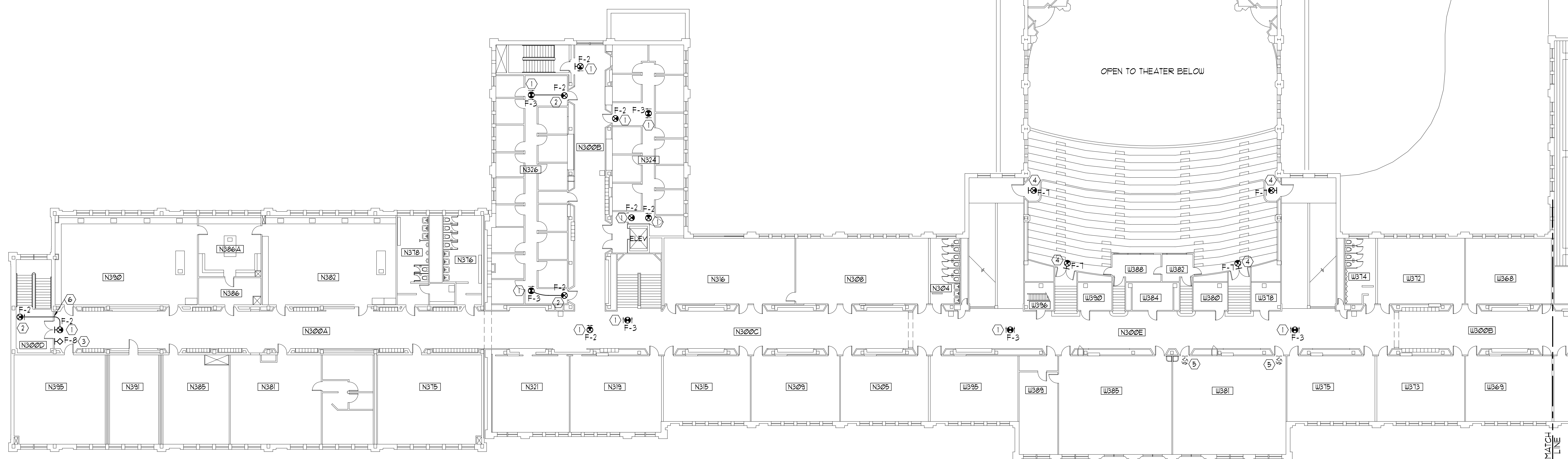




SHEET 15 OF 21



SOUTH CITY CAMPUS SOUTH THIRD LEVEL ELECTRICAL PLAN
SCALE: 1/16" = 1'-0"



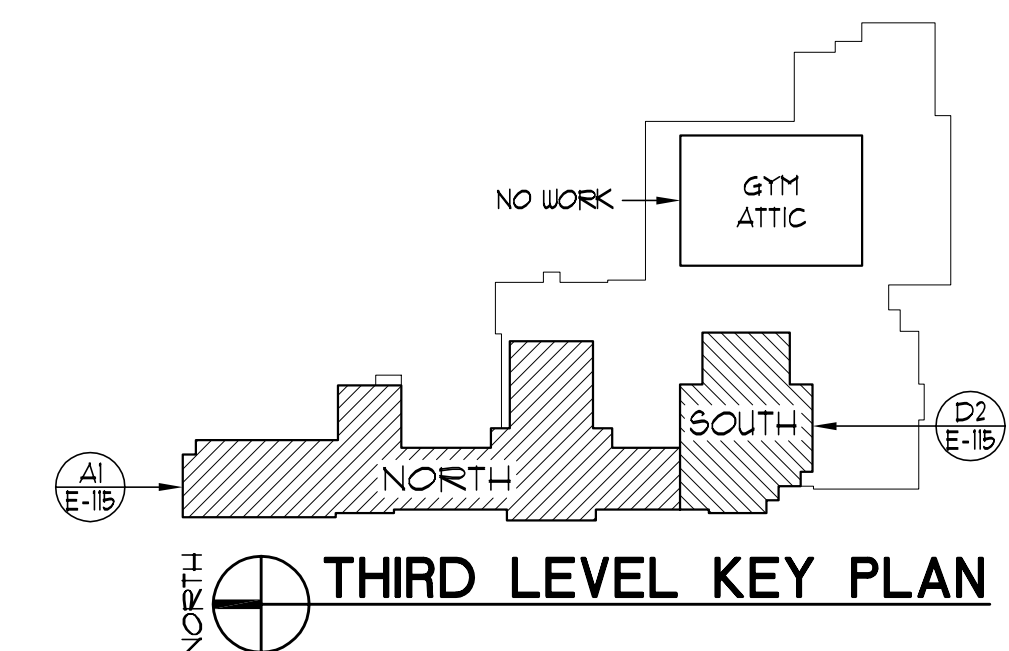
SOUTH CITY CAMPUS NORTH THIRD LEVEL ELECTRICAL PLAN
SCALE: 1/16" = 1'-0" 0 8' 16' 32'

REFERENCE NOTES:
FOR SHEET E-115 ONLY

- ① REPLACE EXISTING EXIT LIGHT WITH NEW LED EXIT LIGHT AND CONNECT TO EXISTING EMERGENCY BRANCH CIRCUIT.
- ② PROVIDE NEW LED EXIT LIGHT ON EXISTING ACoustICAL GRID CEILING. CONNECT TO EXISTING EMERGENCY LIGHT CIRCUIT USING EMT CONDUIT ABOVE EXISTING ACoustICAL GRID CEILING.
- ③ REPLACE EXISTING "AREA OF REFUGE" LIGHT WITH NEW LED "AREA OF REFUGE" LIGHT AND CONNECT TO EXISTING EMERGENCY BRANCH CIRCUIT.
- ④ PROVIDE NEW SURFACE WALL MOUNTED LED EXIT LIGHT TO REPLACE EXISTING FLUSH MOUNTED INCANDESCENT EXIT LIGHT AND CONNECT TO EXISTING EMERGENCY LIGHT CIRCUIT. PROVIDE MINIMUM 20 GAUGE SHEET STEEL CLOSURE PLATE, PAINTED TO MATCH NEW EXIT LIGHT HOUSING, TO COVER EXISTING 8" x 15" RECESSED EXIT LIGHT HOUSING.
- ⑤ REMOVE EXISTING EXIT LIGHT AND ABANDONED WIRING. PROVIDE BLANK COVERPLATE ON EXISTING OUTLET BOX AND PAINT BLACK TO MATCH WALL.

GENERAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC. ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY LOCATIONS OF ELECTRICAL EQUIPMENT AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
3. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING CIRCUITS TO OTHER BUILDINGS OR EQUIPMENT, CONTRACTOR SHALL RECONNECT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
4. ALL MATERIALS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER FOR STORAGE OR BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
5. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND TUNNELS. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
6. ACCURATE INFORMATION FOR EXISTING EXIT LIGHT CIRCUITING IS NOT AVAILABLE FOR SOUTH CITY CAMPUS. EXISTING EXIT LIGHTS ARE BELIEVED TO BE CIRCUITED TO AN EMERGENCY PANEL LOCATED IN THE BUILDING. THEREFORE CONTRACTOR TO FIELD VERIFY EXISTING CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY EXIT LIGHTS NOT CONNECTED TO AN EMERGENCY PANEL.



State of Utah
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**Division of Facilities
Construction & Management**
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267

Internet: <http://dfcm.state.ut.us>

PROJECT ENGINEER:

**THOMAS & KOLKMAN
ENGINEERING CO. INC.**
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
FACSIMILE: (801) 484-3538

CONSULTANTS:

PROJECT:

Salt Lake
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College

REDWOOD ROAD CAMPUS
4600 SOUTH REDWOOD ROAD
SALT LAKE CITY, UTAH

SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
SALT LAKE CITY, UTAH

**VARIOUS BUILDINGS
TUNNEL LIGHTING,
EXIT SIGNS,
AND EMERGENCY
GENERATORS**

REVISIONS:

[illegible]

ISSUE TYPE: CONSTRUCTION DOCUMENTS

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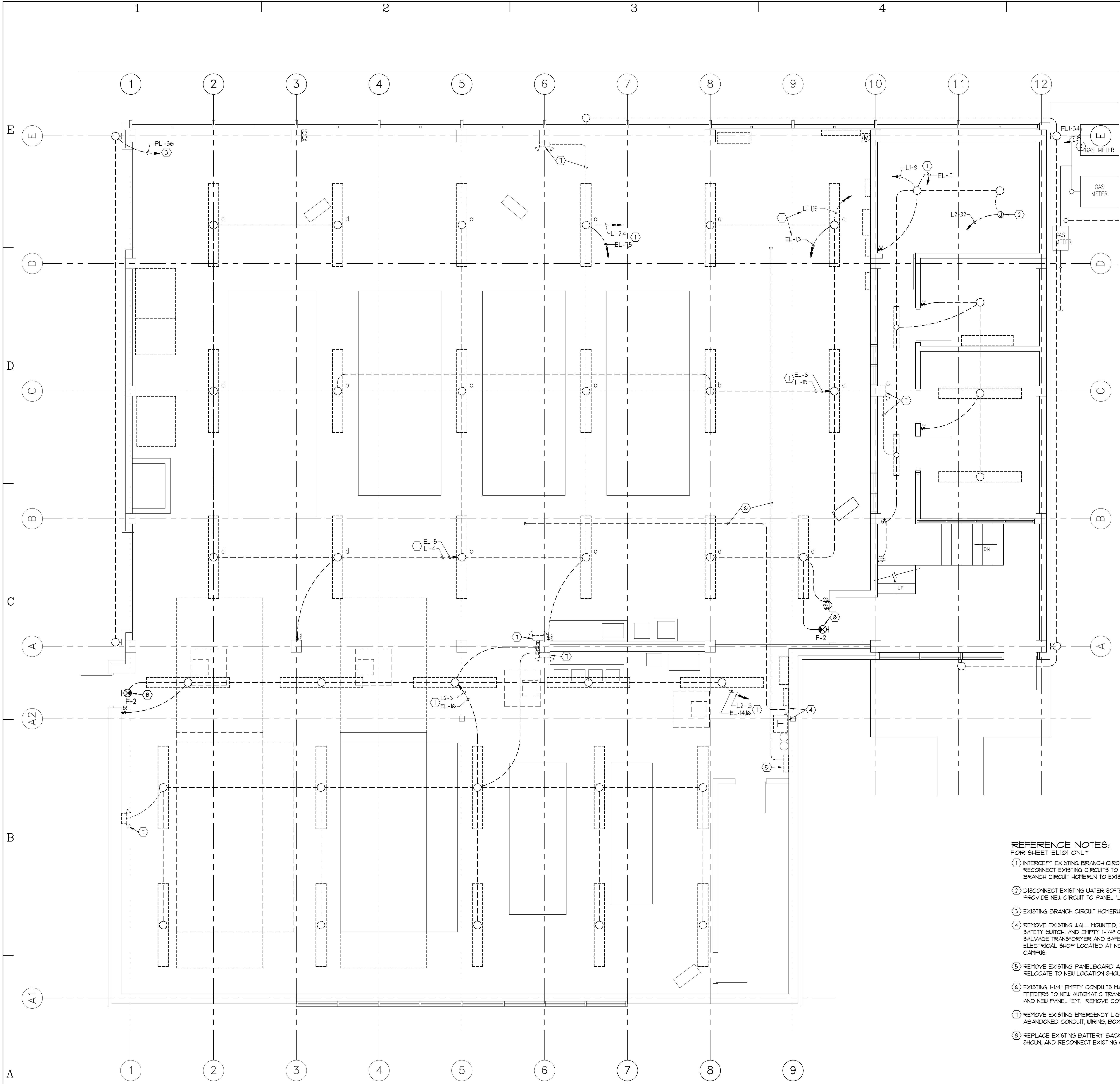
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**SOUTH CITY CAMPUS
THIRD LEVEL
ELECTRICAL PLANS**

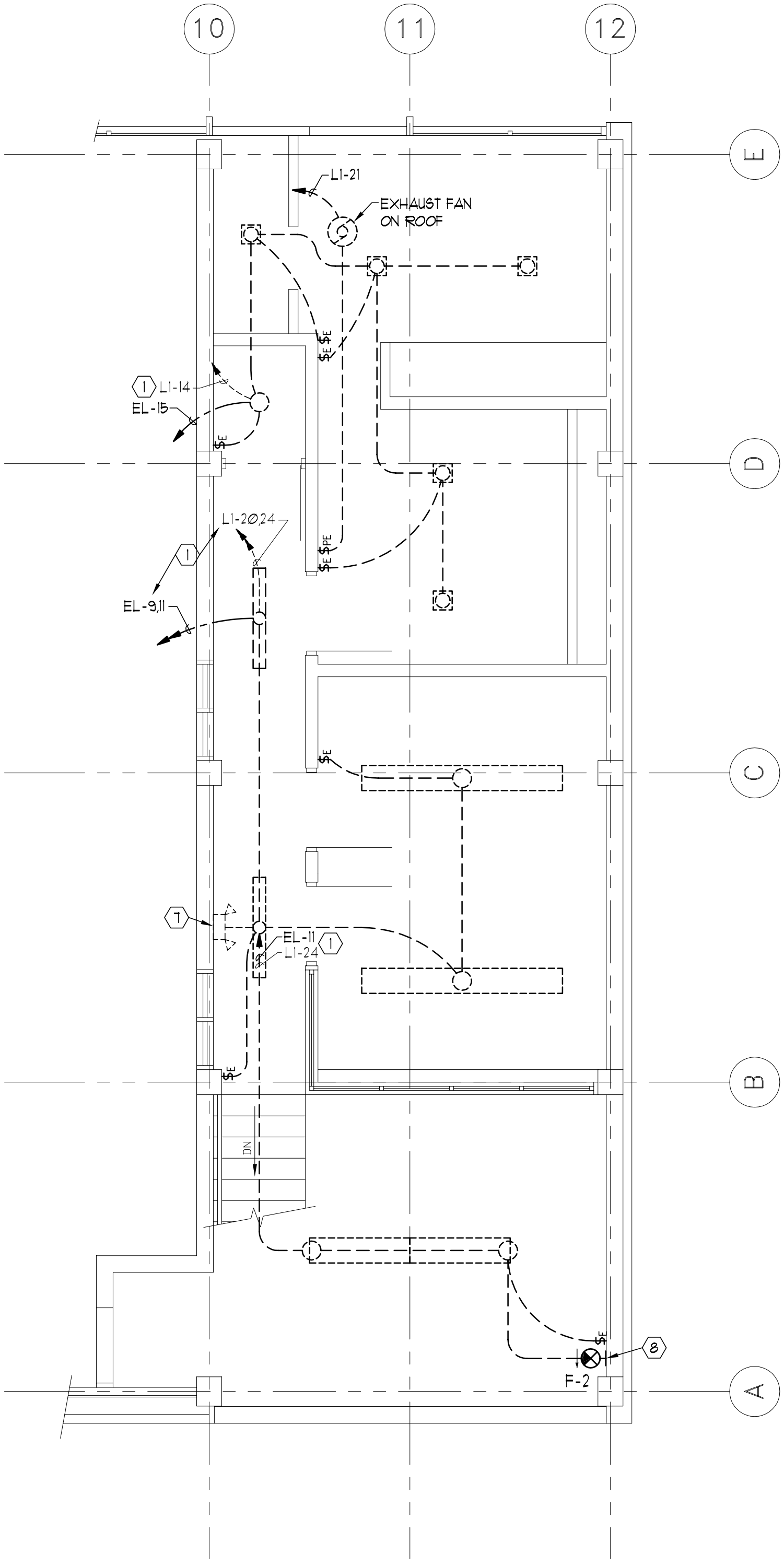
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SHEET 16 OF 21



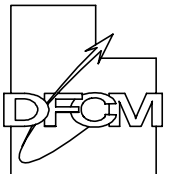
A1 RRC HEAT PLANT MAIN LEVEL LIGHTING PLAN
SCALE: 1/4" = 1'-0"



C5 UPPER LEVEL LIGHTING PLAN
SCALE: 1/4" = 1'-0"

- REFERENCE NOTES:**
FOR SHEET EL101 ONLY
- INTERCEPT EXISTING BRANCH CIRCUIT HOMERUN AT CONVENIENT LOCATION AND RECONNECT EXISTING CIRCUITS TO PANEL 'EL' AS SHOWN. REMOVE ABANDONED BRANCH CIRCUIT HOMERUN TO EXISTING PANELBOARD.
 - DISCONNECT EXISTING WATER SOFTENERS FROM EXISTING LIGHTING CIRCUIT AND PROVIDE NEW CIRCUIT TO PANEL 'L2' AS SHOWN.
 - EXISTING BRANCH CIRCUIT HOMERUN TO REMAIN. SHOWN FOR REFERENCE ONLY.
 - REMOVE EXISTING WALL MOUNTED, 30 KVA DRY TYPE TRANSFORMER, 3P-60A SAFETY SWITCH, AND EMPTY 1-1/4" CONDUIT INSTALLED PART WAY TO TUNNEL. SALVAGE TRANSFORMER AND SAFETY SWITCH FOR SCCC AND DELIVER TO ELECTRICAL SHOP LOCATED AT NORTHWEST CORNER OF REDWOOD ROAD CAMPUS.
 - REMOVE EXISTING PANELBOARD AND USE FOR EMERGENCY PANEL 'EL'. RELOCATE TO NEW LOCATION SHOWN ON SHEET EP101.
 - EXISTING 1-1/4" EMPTY CONDUITS MAY BE USED FOR INSTALLATION OF NEW FEEDERS TO NEW AUTOMATIC TRANSFER SWITCH 'ATS' FROM EXISTING PANEL 'M' AND NEW PANEL 'EM'. REMOVE CONDUIT NOT USED.
 - REMOVE EXISTING EMERGENCY LIGHTING UNIT WITH BATTERY INCLUDING ALL ABANDONED CONDUIT, WIRING, BOXES, ETC.
 - REPLACE EXISTING BATTERY BACK-UP EXIT LIGHT WITH NEW EXIT LIGHT AS SHOWN, AND RECONNECT EXISTING CIRCUIT.
- GENERAL NOTES:**
FOR SHEET EL101 ONLY
- LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITS AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
 - DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
 - WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS TO EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
 - ALL MATERIALS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER FOR STORAGE OR BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
 - TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND TUNNELS. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
 - ALL EXISTING LIGHT FIXTURES AND SWITCHES SHOWN ARE TO REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED, REPLACED, OR RELOCATED.

State of Utah
Department of Administrative Services



Division of Facilities
Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267

Internet: <http://dfcm.state.ut.us>

PROJECT ENGINEER:
**THOMAS & KOLKMAN
ENGINEERING CO. INC.**
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
FACSIMILE: (801) 484-3538

CONSULTANTS:

PROJECT:

Salt Lake
Community
College

REDWOOD ROAD CAMPUS
4800 SOUTH REDWOOD ROAD
SALT LAKE CITY, UTAH
SOUTH CITY CAMPUS
1575 SOUTH STATE STREET
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**VARIOUS BUILDINGS
TUNNEL LIGHTING,
EXIT SIGNS,
AND EMERGENCY
GENERATORS**

REVISIONS:

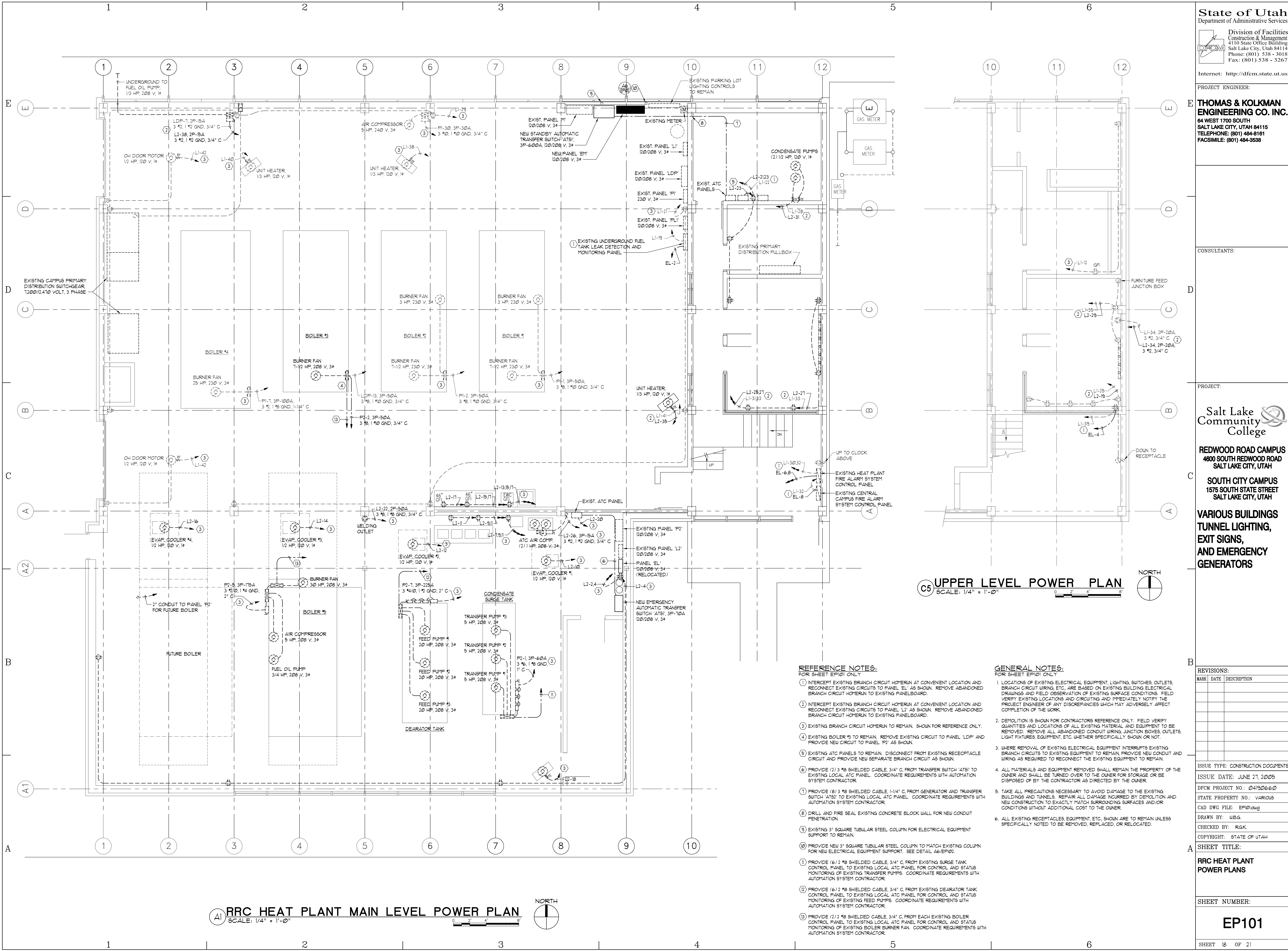
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SHEET TITLE:
**RRC HEAT PLANT
LIGHTING PLANS**

SHEET NUMBER:
EL101

SHEET 17 OF 21



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Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267

Internet: <http://dfcm.state.ut.us>

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**THOMAS & KOLKMAN
ENGINEERING CO. INC.**
64 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84115
TELEPHONE: (801) 484-8161
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Community
College**
REDWOOD ROAD CAMPUS
4800 SOUTH REDWOOD ROAD
SALT LAKE CITY, UTAH
SOUTH CITY CAMPUS
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**VARIOUS BUILDINGS
TUNNEL LIGHTING,
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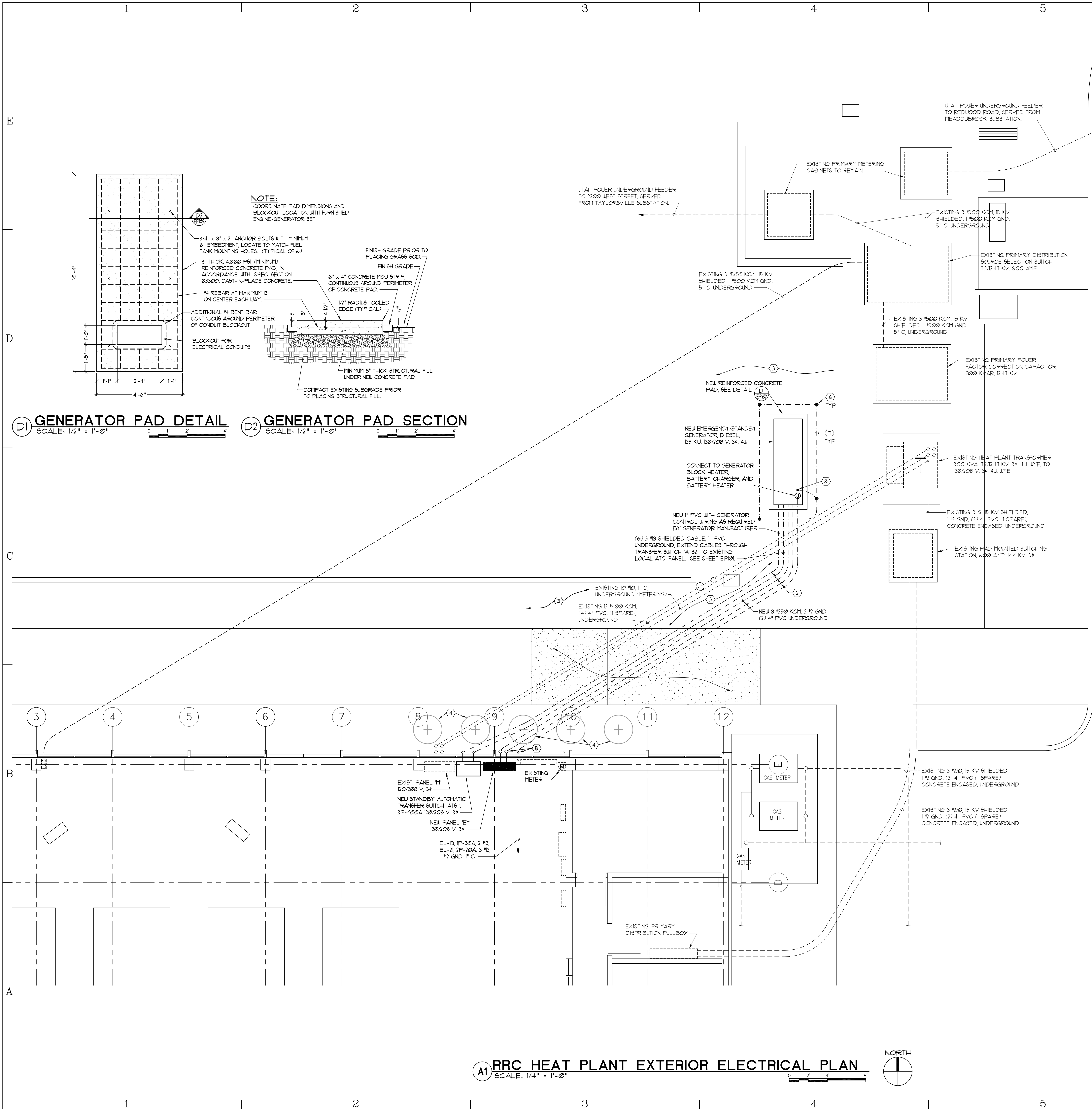
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SHEET TITLE:
**RRC HEAT PLANT
POWER PLANS**

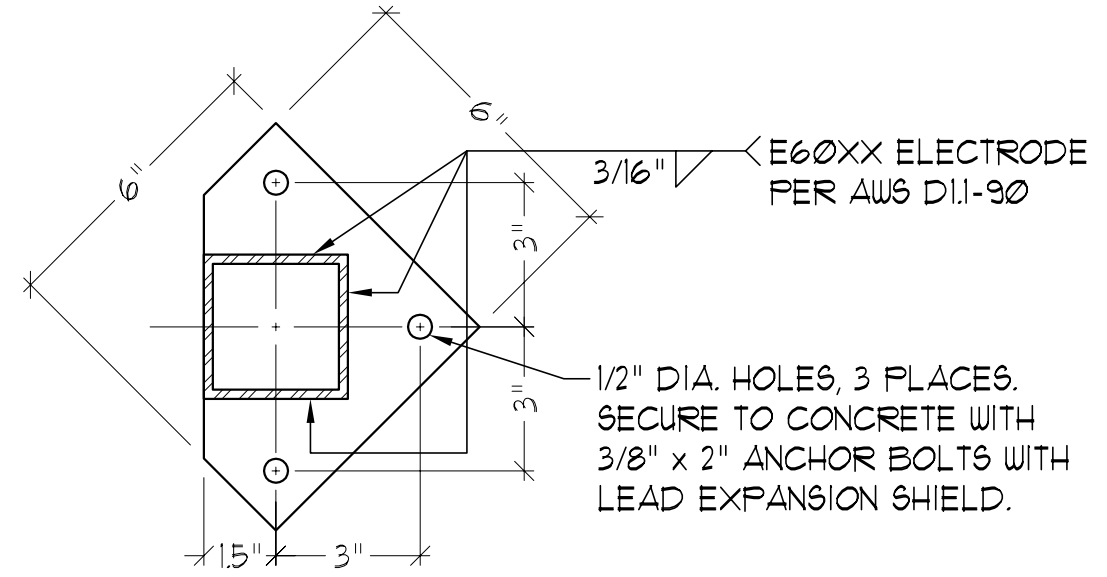
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EP101

SHEET 18 OF 21

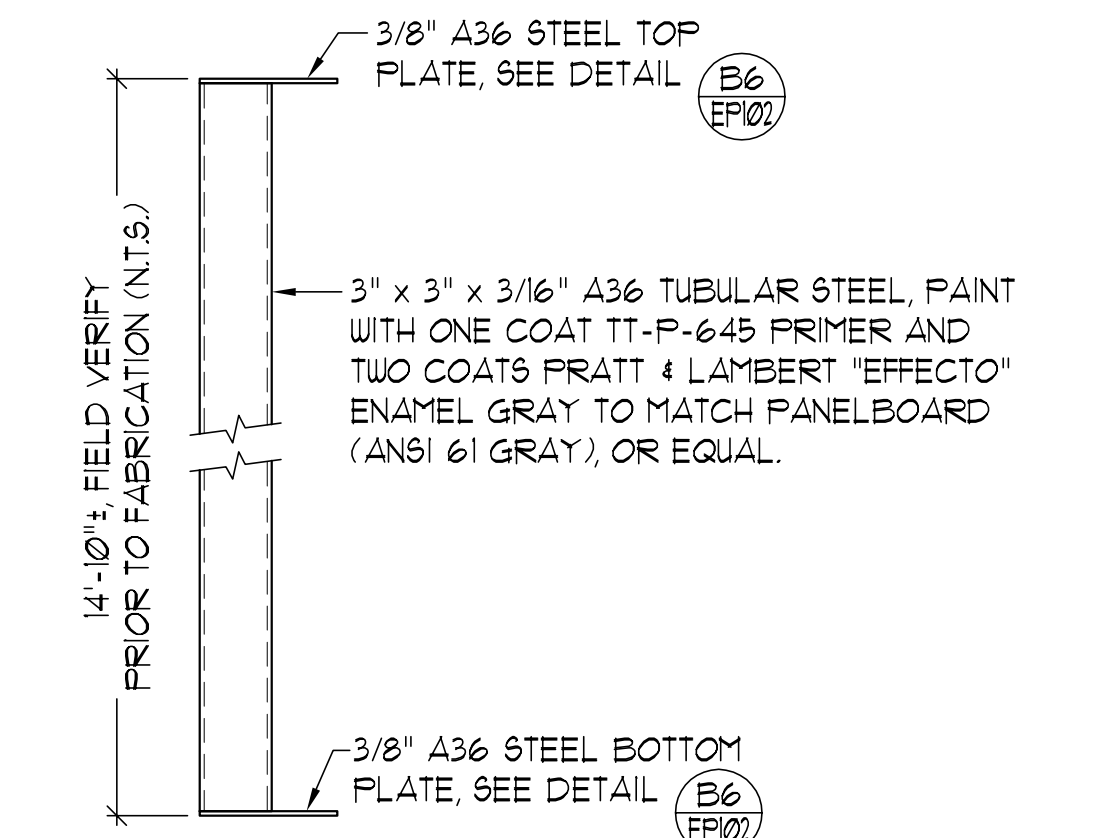


- GENERAL NOTES:**
FOR SHEET EP102 ONLY
- LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC. ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
 - DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
 - WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS TO EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
 - ALL MATERIALS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER FOR STORAGE OR BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
 - TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND TUNNELS. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.
 - REPLACE GRASS SOD DISTURBED BY EXCAVATION WITH NEW GRASS SOD IN ACCORDANCE WITH SPECIFICATION SECTION 02110.
 - TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING UNDERGROUND UTILITIES. IMMEDIATELY REPAIR ANY DAMAGE TO EXISTING UNDERGROUND IRRIGATION SPRINKLER SYSTEM, SPRINKLER CONTROL WIRING, WATER LINES, AND OTHER UNDERGROUND UTILITIES.

- REFERENCE NOTES:**
FOR SHEET EP102 ONLY
- SAW CUT EXISTING SIDEWALK AT TOOL JOINT AND REMOVE AS REQUIRED TO INSTALL NEW UNDERGROUND CONDUITS. REPLACE WITH NEW 6" THICK SIDEWALK IN ACCORDANCE WITH SPECIFICATION SECTION 0330 - CAST IN PLACE CONCRETE.
 - HAND EXCAVATE FOR UNDERGROUND CONDUITS FROM GENERATOR TO HEAT PLANT BUILDING TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES (NOT SHOWN).
 - REPLACE EXISTING GRASS SOD IN AREA OF NEW GENERATOR AND UNDERGROUND CONDUITS WITH NEW GRASS SOD IN ACCORDANCE WITH SPECIFICATION SECTION 02110 - GRASS SOD.
 - REMOVE AND SALVAGE EXISTING SHRUBS AS REQUIRED TO INSTALL NEW UNDERGROUND CONDUITS. REINSTALL SHRUBS AFTER COMPLETION OF WORK OR PROVIDE NEW SHRUBS TO MATCH EXISTING SPECIES. TAXUS B. REF: 0208. 5 GALLON BUCKET. PROVIDE ONE NEW SHRUB TO REPLACE MISSING SHRUB.
 - TURN NEW CONDUITS UP TO ABOVE GRADE OUTSIDE OF BUILDING AND INSTALL TYPE 1B CONDUIT BODY. HOLE SAW EXISTING INSULATED PANEL, BELOW WINDOWS FOR NEW RIGID CONDUIT PENETRATION FROM CONDUIT BODY INTO BACK OF NEW PANEL BOARD OR EQUIPMENT ENCLOSURE AS REQUIRED. SEAL CONDUIT THROUGH INSULATED PANEL WATER TIGHT WITH SILICONE CAULK. (MATCH EXISTING CONDUIT ENTRANCES TO BUILDING).
 - PROVIDE 3/4" x 10'-0" COPPER GROUND RODS FOR GENERATOR GROUNDING.
 - 1/0 STRANDED BARE COPPER GROUND CONDUCTOR BURIED MINIMUM 24" BELOW GRADE. CONNECT TO GROUND RODS BY EXOTHERMIC WELD.
 - 1/0 GROUND, 1" PVC SLEEVE, CONNECT FROM GROUND RODS TO GENERATOR GROUND.



B6 BASEPLATE DETAIL
SCALE: 3" = 1'-0"



A6 STEEL COLUMN DETAIL
SCALE: 1-1/2" = 1'-0"

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SALT LAKE CITY, UTAH

**VARIOUS BUILDINGS
TUNNEL LIGHTING,
EXIT SIGNS,
AND EMERGENCY
GENERATORS**

| REVISIONS: | |
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| MARK | DATE DESCRIPTION |
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ISSUE TYPE: CONSTRUCTION DOCUMENTS

ISSUE DATE: JUNE 21, 2005

DFCM PROJECT NO.: 04190660

STATE PROPERTY NO.: VARIOUS

CAD DWG FILE: EP102.dwg

DRAWN BY: WBG

CHECKED BY: R&K

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SHEET TITLE:

**RRC HEAT PLANT
EXTERIOR POWER PLAN
AND DETAILS**

SHEET NUMBER:

EP102

SHEET 19 OF 21

1

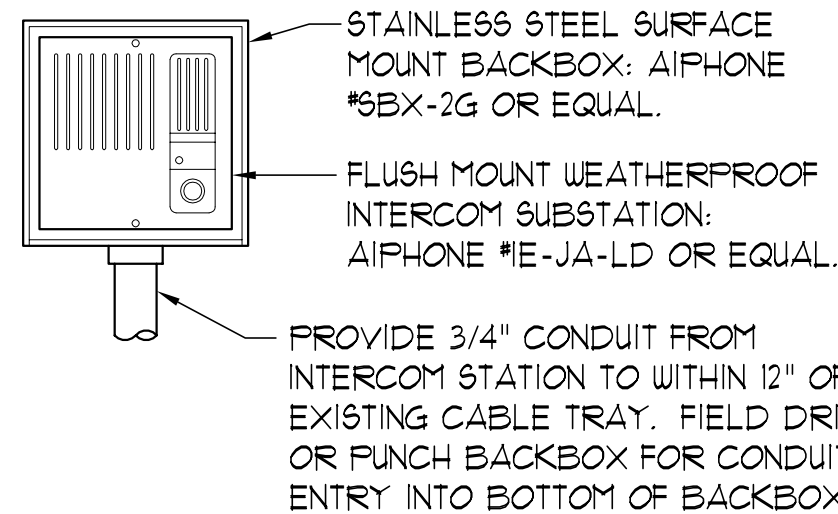
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3

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6



B6 INTERCOM STATION DETAIL
SCALE: 3" = 1'-0"

INTERCOM SYSTEM NOTES:

- INTERCOM SYSTEM MANUFACTURER'S REPRESENTATIVE OR TECHNICIAN SHALL:
1. PROVIDE SUPERVISION OF INSTALLATION OF THE INTERCOM SYSTEM AND MAKE ALL FINAL WIRING CONNECTIONS.
 2. PROVIDE NECESSARY BALANCING AND ADJUSTMENT OF THE INTERCOM SYSTEM.
 3. TEST THE INTERCOM SYSTEM IN THE PRESENCE OF THE OWNER AND PROJECT ENGINEER TO VERIFY SYSTEM IS IN WORKING ORDER.
 4. PROVIDE TRAINING FOR THE OWNER'S MAINTENANCE AND OPERATION PERSONNEL IN THE PROPER USE AND MAINTENANCE OF THE SYSTEM.

D3 RRC TUNNELS INTERCOM RISER DIAGRAM
SCHEMATIC

GENERAL NOTES:

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, OUTLETS, LIGHT FIXTURES, EQUIPMENT, ETC. WHETHER SPECIFICALLY SHOWN OR NOT.
3. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS TO EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
4. ALL MATERIALS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER FOR STORAGE OR BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
5. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDINGS AND TUNNELS. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.

REFERENCE NOTES:

- FOR SHEET E-601 ONLY
- (1) PROVIDE NEW SIEMENS TYPE 'QU42' BRANCH CIRCUIT BREAKER IN EXISTING SPACE.
 - (2) PROVIDE NEW SIEMENS TYPE 'BLH' BRANCH CIRCUIT BREAKER IN EXISTING SPACE.
 - (3) PROVIDE (6) 3 #8 SHIELDED CABLE, 1-1/4" C, FROM GENERATOR AND TRANSFER THROUGH TRANSFER SWITCH 'ATS2' TO EXISTING LOCAL ATC PANEL. SEE SHEET EPI01. COORDINATE REQUIREMENTS WITH AUTOMATION SYSTEM CONTRACTOR.
 - (4) PROVIDE (8) 3 #8 SHIELDED CABLE, 1-1/4" C, FROM GENERATOR AND TRANSFER SWITCH 'ATS2' TO EXISTING LOCAL ATC PANEL. SEE SHEET EPI01. COORDINATE REQUIREMENTS WITH AUTOMATION SYSTEM CONTRACTOR.
 - (5) PROVIDE (2) 3 #8 SHIELDED CABLE, 3/4" C, FROM TRANSFER SWITCH 'ATS1' TO EXISTING LOCAL ATC PANEL. SEE SHEET EPI01. COORDINATE REQUIREMENTS WITH AUTOMATION SYSTEM CONTRACTOR.

REVISIONS:

MARK DATE DESCRIPTION

ISSUE TYPE: CONSTRUCTION DOCUMENTS

ISSUE DATE: JUNE 21, 2005

DFCM PROJECT NO.: 04190660

STATE PROPERTY NO.: VARIOUS

CAD DWG FILE: E-601.dwg

DRAWN BY: WBG

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SHEET TITLE:

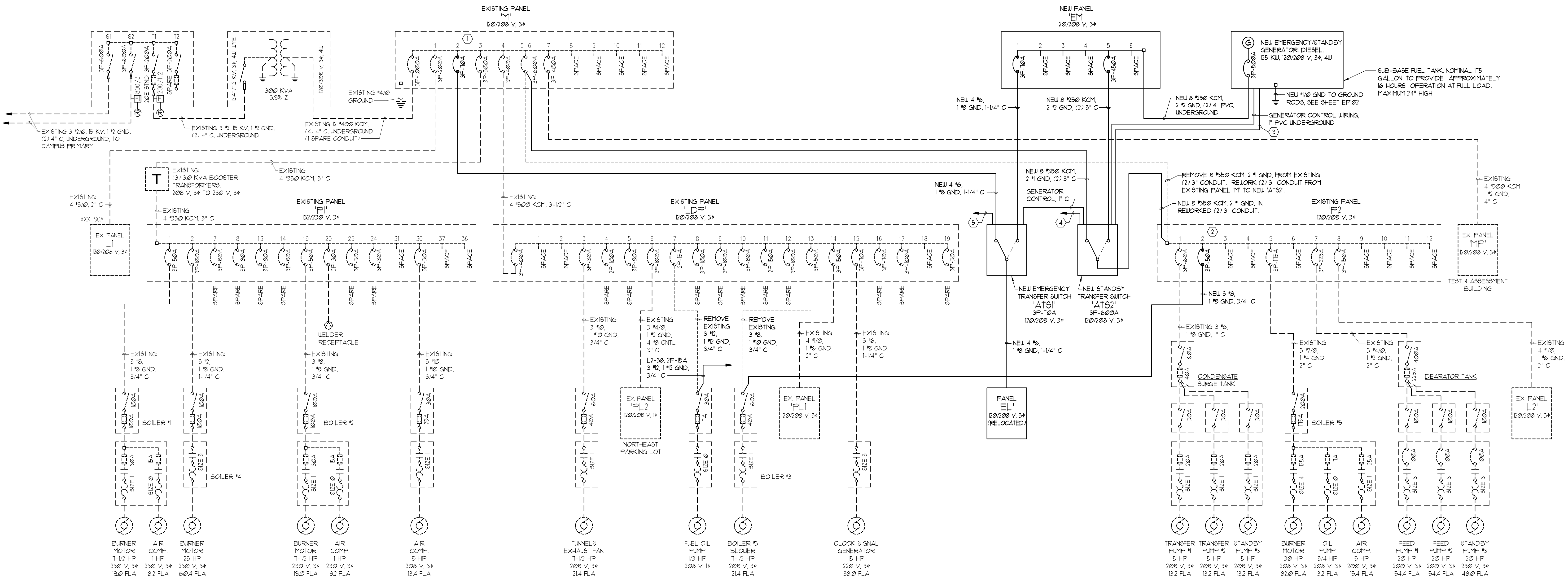
**RRC HEAT PLANT
SINGLE LINE DIAGRAMS**

SHEET NUMBER:

E-601

SHEET 20 OF 21

A1 RRC HEAT PLANT SINGLE LINE DIAGRAM
SCHEMATIC



E

D

C

B

A

| EXISTING PANEL 'L1' SIEMENS TYPE 'S1', WITH 'BLH' BREAKERS 3 POLE 250 AMP MAIN LUGS | | | | | | | | | | 22,000 A I.C., FULLY RATED 120/208 VOLT, 3 PHASE, 4 WIRE SURFACE MOUNTED | | | | | | | | | |
|---|----------------|---------------------------|----------------|-----------------|-----------------|---------|---------|-----------------|----------------|--|---|------------|--|--|--|--|--|--|--|
| CIR NO. | BRKR P AMPS | DESCRIPTION | NO. LTS/REC | CIRCUIT LOAD | PHASE LOAD - VA | | | CIRCUIT LOAD | NO. REC/LTS | DESCRIPTION | BRKR P AMPS | CIR NO. | | | | | | | |
| | | | | | PHASE A | PHASE B | PHASE C | | | | | | | | | | | | |
| 1 | 20 | LTS. BOILER ROOM, NE * | | | 0 | | | | | LTS. BOILER RM. MIDDLE * | 1 | 20 | | | | | | | |
| 3 | | SPARE | | | | | 0 | | | LTS. BOILER RM. NW * | | 4 | | | | | | | |
| 5 | | SIMPLEX MASTER CLOCK | | 1,000 | | | 1,000 | | | SPARE | | 6 | | | | | | | |
| 7 | | REC. CENTER BOILER ROOM | 4 | 720 | 720 | | | | | LTS. RM 105 (SOFTENER) * | | 8 | | | | | | | |
| 9 | | SPARE | | | | | 0 | | | SPARE | | 10 | | | | | | | |
| 11 | | SPARE | | | | | 360 | 360 | 2 | REC. RESTROOM UPSTAIRS | | 12 | | | | | | | |
| 13 | | SPARE | | | 0 | | | | | LTS. RESTROOM * | | 14 | | | | | | | |
| 15 | | LTS. BOILER RM. NW * | | | | 1,440 | | 1,440 | 8 | REC. TUNNEL | | 16 | | | | | | | |
| 17 | | SPARE | | | | | 1,620 | 1,620 | 9 | REC. TUNNEL | | 18 | | | | | | | |
| 19 | | OIL TANK LEAK DETECTION* | | | 0 | | | | | LTS. RM 201 * | | 20 | | | | | | | |
| 21 | | REC. EAST CNTR BOILER RM | 4 | 720 | | 720 | | | | DATA BASE 1, 2, REC 105 + | | 22 | | | | | | | |
| 23 | | LTS. OUTSIDE | 4 | 860 | | | 860 | | | LTS. ENTRY * | | 24 | | | | | | | |
| 25 | | REC. RM 201 SOUTH WALL + | | | 0 | | | | | SPARE | | 26 | | | | | | | |
| 27 | | LTS. OUTSIDE | 2 | 430 | | 430 | | | | CONDENSATE PUMPS + | | 28 | | | | | | | |
| 29 | | REC. NORTH BOILER ROOM | 4 | 720 | | | 720 | | | FIRE ALARM PANEL * | 1 | 30 | | | | | | | |
| 31 | | REC. RM 104 SOUTH WALL + | | | | | | | | FIRE ALARM PANEL * | 1 | 32 | | | | | | | |
| 33 | | REC. PLUGMOLD RM 104 + | | | 0 | | 0 | | | THRU-WALL AC UNIT + | 2 | 34 | | | | | | | |
| 35 | | REC. PLUGMOLD RM 201 + | | | | | | 0 | | - | | 36 | | | | | | | |
| 37 | | SPARE | | | 865 | | | 865 | | UNIT HTR. NORTH EAST | 1 | 38 | | | | | | | |
| 39 | | REC. JC COMPUTER RM 201* | | | | 865 | | 865 | | UNIT HTR. NORTH WEST | 1 | 40 | | | | | | | |
| 41 | 20 | UNIT HTR. SD. CNTR EAST + | | | | | 1,175 | 1,175 | | OVERHEAD DOOR OPENERS | 1 | 42 | | | | | | | |
| | | | | | 1,585 | 3,455 | 5,735 | | | | | | | | | | | | |
| TOTAL CONNECTED LOAD | | | | | 10,775 VA | | | 30 AMPS | | | | | | | | | | | |
| CALCULATED FEEDER DEMAND, NEC 220 | | | | | 11,391 VA | | | 32 AMPS | | | FEEDER: EXISTING 4 #3/0, 1 #6 GND, 2" C | | | | | | | | |
| * RECONNECT EXISTING CIRCUIT TO PANEL 'EL' + RECONNECT EXISTING CIRCUIT TO PANEL 'L2' | | | | | | | | | | | | | | | | | | | |

| EXISTING PANEL 'P1' SIEMENS TYPE 'S3', WITH 'BLH' BREAKERS 3 POLE 400 AMP MAIN LUGS | | | | | | | | | | 18,000 A I.C. FULLY RATED 132/230 VOLT, 3 PHASE, 4 WIRE SURFACE MOUNTED | | | |
|---|----------------|-----------------|----------------|-----------------|-----------------|--------|--------|-----------------|----------------|---|-----------------------------------|------------|--|
| CIR NO. | BRKR P AMPS | DESCRIPTION | NO. LTS/REC | CIRCUIT LOAD | PHASE LOAD - VA | | | CIRCUIT LOAD | NO. REC/LTS | DESCRIPTION | BRKR P AMPS | CIR NO. | |
| 1 | 3 | BOILER NO. 1 | | 3,610 | 11,630 | | | 8,020 | | BOILER NO. 4 | 3 | 100 | |
| 3 | - | - | | 3,610 | | 11,630 | | 8,020 | - | - | - | 4 | |
| 5 | - | - | | 3,610 | | | 11,630 | 8,020 | - | - | - | 6 | |
| 7 | 3 | 80 SPARE | | | 0 | | | | | SPARE | 3 | 80 | |
| 9 | - | - | | | | 0 | | | - | - | - | 8 | |
| 11 | - | - | | | | | 0 | | - | - | - | 12 | |
| 13 | 3 | 80 SPARE | | | 0 | | | | | SPARE | 3 | 80 | |
| 15 | - | - | | | | 0 | | | - | - | - | 16 | |
| 17 | - | - | | | | | 0 | | - | - | - | 18 | |
| 19 | 3 | 50 BOILER NO. 2 | | 3,610 | 6,110 | | | 2,500 | | WELDING OUTLET BELOW PNL. | 2 | 30 | |
| 21 | - | - | | 3,610 | | 6,110 | | 2,500 | - | - | - | 22 | |
| 23 | - | - | | 3,610 | | | 3,610 | | | SPARE | 3 | 30 | |
| 25 | 3 | 30 SPARE | | | 0 | | | | | SPARE | 3 | 30 | |
| 27 | - | - | | | | 0 | | | - | - | - | 26 | |
| 29 | - | - | | | | | 1,780 | 1,780 | | AIR COMP. NORTH WALL | 3 | 30 | |
| 31 | | SPACE | | | 1,780 | | | 1,780 | | - | - | 32 | |
| 33 | | | | | | 1,780 | | 1,780 | | - | - | 34 | |
| 35 | | | | | | | 0 | | | SPACE | 1 | 36 | |
| 37 | | | | | 0 | | | | | SPACE | 1 | 38 | |
| 39 | | | | | | 0 | | | | SPACE | 1 | 40 | |
| 41 | 1 | SPACE | | | | | 0 | | | SPACE | 1 | 42 | |
| | | | | | 19,520 | 19,520 | 17,020 | | | | | | |
| TOTAL CONNECTED LOAD | | | | | 56,060 VA | | | 141 AMPS | | | | | |
| CALCULATED FEEDER DEMAND, NEC 220 | | | | | 57,075 VA | | | 143 AMPS | | | FEEDER: EXISTING 4 #350 KCM, 3" C | | |

| EXISTING PANEL 'LDP' SQUARE D TYPE 'HCN', 1-LINE 3 POLE 400 AMP MAIN BREAKER | | | | | | | | | | 18,000 A I.C. FULLY RATED 120/208 VOLT, 3 PHASE, 4 WIRE SURFACE MOUNTED | | | | | | | | | |
|--|----------------|-------------------------|------------|------------|-----------------|-----------------|--------|----------|-----------------|---|------------|-----------------------|----------------|------------|--|--|--|--|--|
| CIR NO. | BRKR P AMPS | DESCRIPTION | NO. LTS | NO. REC | CIRCUIT LOAD | PHASE LOAD - VA | | | CIRCUIT LOAD | NO. REC | NO. LTS | DESCRIPTION | BRKR P AMPS | CIR NO. | | | | | |
| 1 | 3 | SPACE (4-1/2") | | | | 0 | | | | | | SPACE (6") | 3 | 2 | | | | | |
| | - | - | | | | | 0 | | | | | - | - | - | | | | | |
| | - | - | | | | | | 0 | | | | - | - | - | | | | | |
| 3 | 30 | TUNNELS EXHAUST FAN | | | 2,565 | 2,565 | | | | | | - | - | - | | | | | |
| | - | - | | | 2,565 | | 2,565 | | | | | SPARE (REMOVED MAINT. | 2 | 100 | | | | | |
| | - | - | | | 2,565 | | | 2,565 | | | | SHOP PANEL 'B' | 3 | 100 | | | | | |
| 5 | 80 | SPARE | | | | 6,205 | | | | 6,205 | | PANEL 'PL2' | 3 | 100 | | | | | |
| | - | - | | | | | 6,205 | | | 6,205 | | (NEW PARKING LOT) | - | - | | | | | |
| | - | - | | | | | | 0 | | | | - | - | - | | | | | |
| 7 | 15 | FUEL OIL PUMP * | | | | 0 | | | | | | SPARE | 3 | 100 | | | | | |
| | - | - | | | | | 0 | | | | | - | 8 | - | | | | | |
| 9 | 100 | SPARE (REMOVED MAINT. | | | | | | | | | | - | - | - | | | | | |
| | - | SHOP PANEL 'A') | | | | 0 | | | | | | SPARE (REMOVED PUMP) | 3 | 80 | | | | | |
| | - | - | | | | | 0 | | | | | - | 10 | - | | | | | |
| 11 | 150 | SPARE (REMOVED NW PRKG. | | | | | 0 | | | | | - | - | - | | | | | |
| | - | LOT PANEL 'PL3') | | | | | | 0 | | | | - | - | - | | | | | |
| 13 | 50 | BOILER #3 * | | | | 0 | | | | | | SPARE (REMOVED PUMP) | 3 | 100 | | | | | |
| | - | - | | | | | 0 | | | | | - | 12 | - | | | | | |
| | - | - | | | | | | 0 | | | | - | - | - | | | | | |
| 15 | 70 | CLOCK SIGNAL GENERATOR | | | 4,825 | 15,160 | | | 10,335 | | | PANEL 'PL1' | 3 | 150 | | | | | |
| | - | - | | | 4,825 | | 14,170 | | 9,345 | | | - | - | - | | | | | |
| | - | - | | | 4,825 | | | 14,135 | 9,310 | | | - | - | - | | | | | |
| 17 | 100 | SPARE (REMOVED PUMP) | | | | 0 | | | | | | SPARE (REMOVED PUMP) | 3 | 70 | | | | | |
| | - | - | | | | | 0 | | | | | - | 16 | - | | | | | |
| | - | - | | | | | | 0 | | | | - | - | - | | | | | |
| 19 | 30 | SPARE | | | 12,070 | | | | 12,070 | | | SPACE (4-1/2") | 3 | 18 | | | | | |
| | - | - | | | | | 12,070 | | 12,070 | | | (FUTURE BOILER #6) | - | - | | | | | |
| | - | - | | | | | | 12,070 | 12,070 | | | - | - | - | | | | | |
| | - | - | | | | 36,000 | 35,010 | | 28,770 | | | - | - | - | | | | | |
| TOTAL CONNECTED LOAD: | | | | | | 99,780 VA | | 277 AMPS | | FEEDER: EXISTING 4 #500 KCM, 3-1/2" C | | | | | | | | | |
| CALCULATED FEEDER DEMAND, NEC 220: | | | | | | 117,420 VA | | 326 AMPS | | | | | | | | | | | |

| EXISTING PANEL 'M' SIEMENS TYPE 'S5', 50" MOUNTING SPACE, PD #850151 3 POLE 1000 AMP MAIN BREAKER - TYPE SN050100A1 | | | | | | | | | | 30,000 A.I.C., FULLY RATED 120/208 VOLT, 3 PHASE, 4 WIRE SURFACE MOUNTED | | | |
|---|----------------|------------------------|----------------|-----------------|-----------------|---------|--------|-------------------------------|----------------|--|----------------|------------|--|
| CIR NO. | BRKR P AMPS | DESCRIPTION | NO. LTS/REC | CIRCUIT LOAD | PHASE LOAD - VA | | | CIRCUIT LOAD | NO. REC/LTS | DESCRIPTION | BRKR P AMPS | CIR NO. | |
| 1 | 3 | 200 PANEL 'L1' | | 1,585 | 5,770 | | | 4,185 | | EMERGENCY PANEL 'EL' | 3 | 70+ | |
| - | - | (QJH2) | | 3,455 | | 8,355 | | 4,900 | | VIA XFR SWITCH 'ATS1' | - | - | |
| - | - | - | | 5,735 | | | 9,440 | 3,705 | | (NEW QJH2) | - | - | |
| 3 | 300 | PANEL 'P1' | | 19,520 | 55,520 | | | 36,000 | | PANEL 'LDP' | 3 | 400 | |
| - | - | (JXD2) | | 19,520 | | 54,530 | | 35,010 | | (JXD2) | - | - | |
| 5 | 600 | PANEL 'P2' | | 17,020 | | | 45,790 | 28,770 | | - | - | - | |
| - | - | (CXDG6) | | 26,785 | 36,785 | | | | | (SINGLE BRANCH BREAKER) | - | 6 | |
| - | - | - | | 40,960 | | 40,960 | | | | - | - | - | |
| - | - | - | | 40,260 | | | 40,260 | | | - | - | - | |
| 7 | 400 | TEST & ASSESSMENT BLDG | | 31,350 | 31,350 | | | | | SPACE | 3 | 400 | |
| - | - | (ESTIMATED LOAD) | | 31,350 | | 31,350 | | | | (JXD2 ?) | - | 8 | |
| - | - | - | | 33,750 | | | 33,750 | | | - | - | - | |
| 9 | 3 | SPACE | | | 0 | | | | | SPACE | 3 | 10 | |
| - | - | - | | | | 0 | | | | - | - | - | |
| - | - | - | | | | | 0 | | | - | - | - | |
| 11 | 3 | SPACE | | | 0 | | | | | SPACE | 3 | 12 | |
| - | - | - | | | | 0 | | | | - | - | - | |
| - | - | - | | | | | 0 | | | - | - | - | |
| | | | | 129,425 | 135,195 | 129,240 | | | | | | | |
| TOTAL CONNECTED LOAD: | | | | 393,860 VA | 1093 AMPS | | | FEEDER: 12 #400 KCM, (3) 4" C | | | | | |
| CALCULATED FEEDER DEMAND, NEC 220: | | | | 424,601 VA | 1179 AMPS | | | (1) 4" SPARE CONDUIT | | | | | |
| + PROVIDE NEW SIEMENS TYPE 'QJH2' BRANCH CIRCUIT BREAKER IN EXISTING SPACE. | | | | | | | | | | | | | |

| EXISTING PANEL 'P2' SIEMENS TYPE 'S4' 3 POLE 600 AMP MAIN LUGS | | | | | | | | | | | | 22,000 A I.C. FULLY RATED 120/208 VOLT, 3 PHASE, 4 WIRE SURFACE MOUNTED | | | | | | | | | | | |
|--|----------------|-------------------------------|------------|------------|-----------------|-----------------|----------|--------|-----------------|----------------------------------|------------|---|----------------|------------|--|--|--|--|--|--|--|--|--|
| CIR NO. | BRKR P AMPS | DESCRIPTION | NO. LTS | NO. REC | CIRCUIT LOAD | PHASE LOAD - VA | | | CIRCUIT LOAD | NO. REC | NO. LTS | DESCRIPTION | BRKR P AMPS | CIR NO. | | | | | | | | | |
| 1 | 3 | 60 SURGE TANK TRANSFER PUMPS | | | 3,165 | 5,730 | | | 2,565 | | | BOILER #3 (RECONNECT FROM 'LDP') | 3 | 50 | | | | | | | | | |
| - | - | - | | | 3,165 | | | 5,730 | 2,565 | | | - | - | - | | | | | | | | | |
| 3 | 3 | 100 SPACE (BLH) | | | | 0 | | | | | | SPACE (BLH) | 3 | 100 | | | | | | | | | |
| - | - | - | | | | | 0 | | | | | - | - | - | | | | | | | | | |
| - | - | - | | | | | | 0 | | | | - | - | - | | | | | | | | | |
| 5 | 3 | 175 BOILER NO. 5 | | | 12,070 | 19,535 | | | 7,465 | | | PANEL 'L2' | 3 | 150 | | | | | | | | | |
| - | - | - | | | 12,070 | | 23,710 | | 11,640 | | | - | - | 8 | | | | | | | | | |
| - | - | - | | | 12,070 | | | | 11,640 | | | - | - | - | | | | | | | | | |
| 7 | 3 | 225 DEARATOR TANK FEED PUMPS | | | 11,520 | 11,520 | | | 23,010 | 10,940 | | SPACE (QJH2) | 3 | 250 | | | | | | | | | |
| - | - | - | | | 11,520 | | 11,520 | | | | | - | - | 8 | | | | | | | | | |
| - | - | - | | | 11,520 | | | 11,520 | | | | - | - | - | | | | | | | | | |
| 9 | 3 | 250 SPACE (QJH2) | | | | 0 | | | | | | SPACE (QJH2) | 3 | 250 | | | | | | | | | |
| - | - | - | | | | | 0 | | | | | - | - | 10 | | | | | | | | | |
| - | - | - | | | | | | 0 | | | | - | - | - | | | | | | | | | |
| 11 | 3 | 400 SPACE (JDK SINGLE BRANCH) | | | | 0 | | | | | | - | - | - | | | | | | | | | |
| - | - | - | | | | | 0 | | | | | - | - | - | | | | | | | | | |
| - | - | - | | | | | | 0 | | | | - | - | - | | | | | | | | | |
| 13 | 3 | 400 SPACE (JDK SINGLE BRANCH) | | | | 0 | | | | | | - | - | - | | | | | | | | | |
| - | - | - | | | | | 0 | | | | | - | - | - | | | | | | | | | |
| - | - | - | | | | | | 0 | | | | - | - | - | | | | | | | | | |
| | | | | | | 36,785 | 40,960 | 40,260 | | | | | | | | | | | | | | | |
| TOTAL CONNECTED LOAD: | | | | | | 118,005 VA | 328 AMPS | | | FEEDER: NEW 8 #350 KCM, 2 #1 GND | | | | | | | | | | | | | |
| CALCULATED FEEDER DEMAND, NEC 220: | | | | | | 117,710 VA | 327 AMPS | | | REWORKED (2) 3" C | | | | | | | | | | | | | |

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